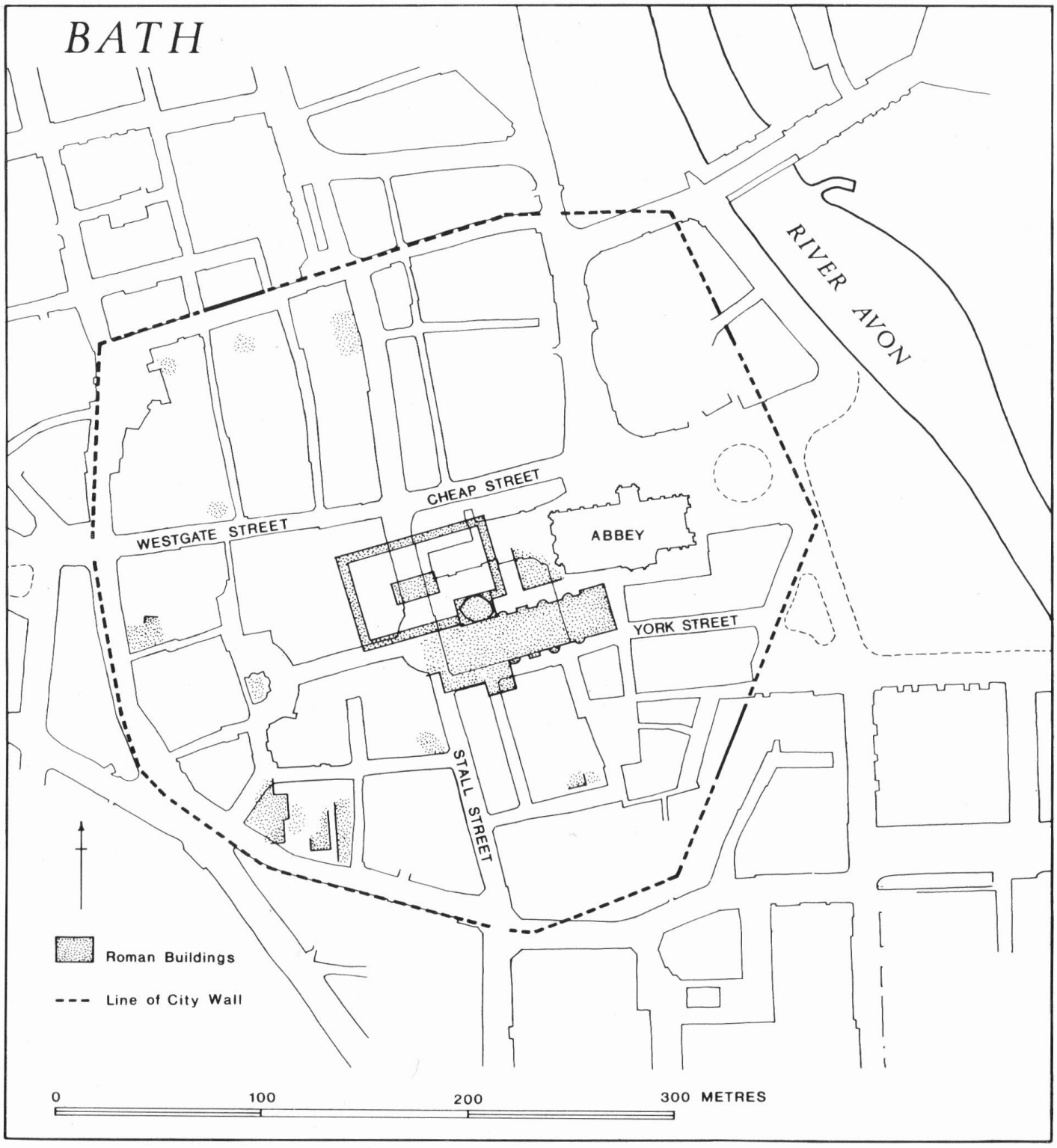
THE ROMAN BATHS

A GUIDE TO THE BATHS AND ROMAN MUSEUM


BATH
RIVER AVON
CHEAP STREET
WESTGATE STREET
ABBEY
YORK STREET
STALL STREET
Roman Buildings
Line of City Wall
0
100
200
300 METRES

Roman Bath

Bath is the site of the Roman city of *Aquae Sulis*, which began its life within a decade or two of the Roman conquest in AD43 and flourished until the formal end of the Roman occupation in AD410. The site had many attractions for the early settlers: it dominated a convenient crossing place over the Avon; it lay within the centre of a highly fertile farming area; and, more important, it was provided with a great natural hot spring.

Even before the Romans arrived the spring was revered by the local Iron Age population. They associated with it a native deity called Sul who was probably a god of healing. At this stage the main centre of population lay 7 km away within the defences of the hillfort at Little Solsbury.

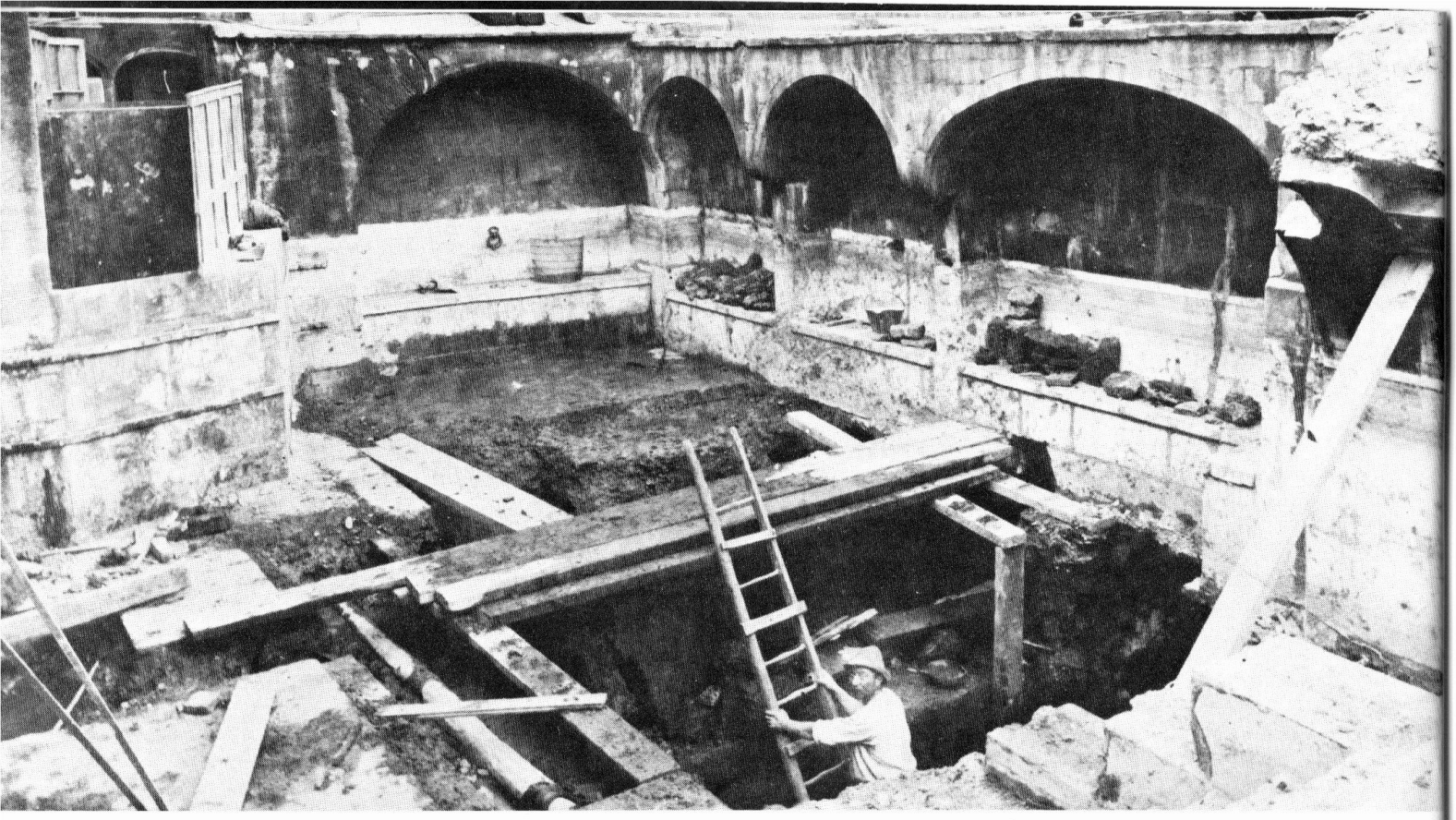
With the coming of the Romans all this changed. In the early years of the invasion a major frontier road – the Fosseway – was built across Britain from Lincoln to the vicinity of Exeter. It crossed the Avon close to Bath, and in all probability a military garrison would have been established somewhere in the area, although the location of their supposed fort is still uncertain. Several tombstones of soldiers have been found (p. 28) erected, perhaps, for troops who died while on frontier duty. Within a few years of the invasion the frontier was pushed forward, the Fosseway remaining to become one of the principal civilian roads of the new province of Britannia.

Gradually the population gravitated towards the river crossing and the early town began to develop along the line of the road. As more people came to hear of the healing qualities of the waters so the number of visitors increased (p. 30). Within 30 or 40 years the springs had been enclosed and the principal spring (now the King's Bath) was provided with a luxurious bathing suite, while immediately adjacent to it, to the north, a classical temple was built in honour of the goddess Sulis Minerva – a conflation of the pre-Roman deity Sulis and the nearest Roman equivalent, Minerva, the goddess of wisdom and of healing.

The temple and the baths formed the centre piece of the growing town. Around them were other public buildings: a colossal monumental structure of unknown function in the Westgate Street area, another bathing establishment around the Hot Bath spring, a shrine of some kind where the Cross Bath now is and a substantial building, possibly a theatre, under the Abbey Yard and the west end of the Abbey. Taken together the buildings of Aquae Sulis would have provided the visitor to the spa with all the facilities he could have wished for, set within an environment of elegance and comfort. Fragments of town houses have also been recovered from time to time while shops and workshops probably spread north in a kind of ribbon development along the Fosseway (now London Road): across the river, in the area of Bathwick, a substantial suburb developed.

Sometime, probably late in the third or early in the fourth century, the central area of the settlement, comprising all the major buildings, was enclosed in a defensive wall which was to constrain the plan of the city until the eighteenth and nineteenth centuries.

After centralized Roman government had collapsed in the early fifth century Bath declined rapidly but its great buildings, now gaunt ruins, continued to dominate the scene for several centuries and were even chosen as the subject of a Saxon poem written in the eighth century. Eventually, reduced by weather, robbed of their reusable stone by later builders and engulfed in a rising marsh they disappeared from sight until eighteenth century builders began to unearth them once more.



Discovery

The discovery of the Roman buildings of Bath is a subject full of fascination. For centuries scholars have known that somewhere beneath the streets of Bath lay the temple of Minerva because, by pure chance, a third century Roman writer, Solinus, recorded that here were springs "furnished luxuriously for human use" and "over them Minerva presides".

Significantly the first important discovery to be made, in July 1727 by workmen digging a sewer along Stall Street, was the gilded bronze head of the cult statue of Minerva – now the prime exhibit of the museum (p. 4). With their appetites whetted local antiquarians henceforth kept a close watch on all building operations. In 1755, beneath the area (now paved), immediately to the south of the Abbey, workmen came upon the remains of a very considerable bathing establishment but since the Duke of Kingston, who owned the site, wanted to build a new suite of commercial baths here the Roman work was rapidly reburied after being only briefly recorded.

Even more surprising discoveries were to be made in the autumn of 1790 while the present Pump Room was being built. In the foundation trenches dug for the new walls a number of sculptured stones, comprising much of the pediment of the temple, was recovered together with fragments of several other sculptured Roman monuments. The find not only established for the first time the approximate position of the temple but it demonstrated to an admiring public something of the quality of Bath's magnificent Roman buildings.

Throughout the early years of the nineteenth century parts of what is now known to be the bathing establishments were noted from time to time in building work but it was not until the 1860s, when a major building programme was underway on a site on the west side of Stall

Street opposite the Pump Room, that the next major advance in knowledge was made. It was here amid the mud and clutter of a building site that a local archaeologist, J. T. Irvine, carefully recorded the foundations (*podium*) of the actual temple of Sulis, running out beneath Stall Street, and was able to trace much of its surrounding colonnade. Now, at last, the position of the temple had been accurately located.

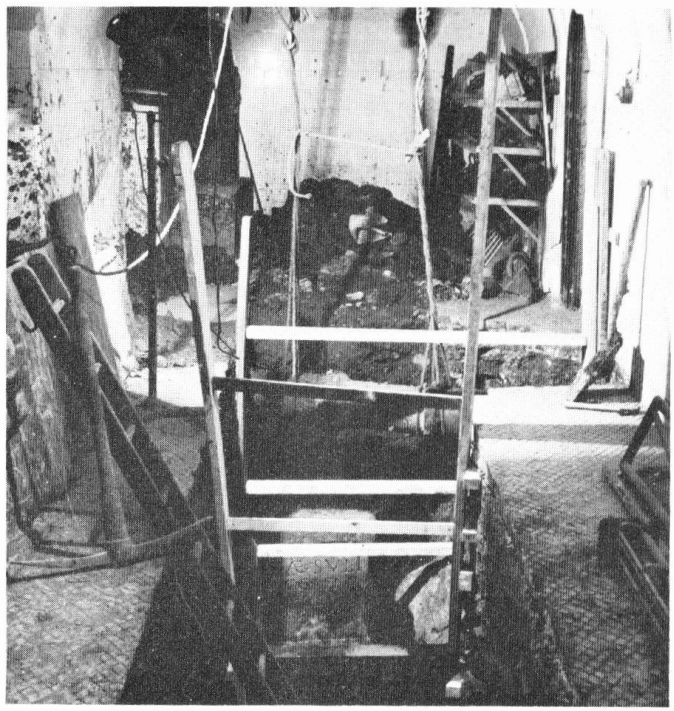
A few years later the city engineer, Major Davis, was called to mend a leak in the King's Bath. By chance the trench he dug hit the corner of what we now know to be the Roman Great Bath. Once more excitement ran high and in 1878 the City Corporation acquired much of the surrounding property enabling Davis to commence his excavations on the Roman reservoir and its outfall drain. Small objects of great rarity, thrown into the sacred spring by the Romans, were found in profusion and excavations continued apace. Public subscription allowed further properties to be bought and demolished so that Davis could continue his work and by 1887 much of the Great Bath, the Circular Bath and the heated room to the west had been uncovered. Further work in 1923 exposed, once more, the baths found in 1755, which were soon to be roofed over and added to the remains displayed for visitors.

Here matters rested until 1959 when the building on the west side of Stall Street, the foundation trenches of which Irvine had observed seventy years earlier, was once more redeveloped. In very difficult conditions the local archaeological society led by W. Wedlake rescued further important details, as valuable Roman structures were gouged out by mechanical diggers and the site flooded with concrete.

Since 1963 the Bath Excavation Committee has been carrying out limited excavations in the cellars of buildings in the centre of the city in an attempt to understand the structure and history of Bath's great Roman monuments. As the work has progressed startling discoveries have been made. One trench dug beneath the Pump Room produced one of the sculpted corners of the sacrificial altar set up in front of the temple, together with an inscribed statue base dedicated to Sulis Minerva (pp. 12–13), while another yielded several large fragments of other monuments including the famous Facade of the Four Seasons (pp. 14–15). There can be little reasonable doubt that the undisturbed ground in this part of the city will be full of further surprises.

Opposite page, top: the excavations of the Roman reservoir beneath the King's Bath in 1878.

Below: the excavations in progress in the narrow cellars beneath the Pump Room in 1965.



The Temple of Sulis Minerva

Today there is nothing for the visitor to see *in situ* of the great centre-piece of Roman Bath – the temple complex built to honour Sulis Minerva. The temple itself lies buried beneath Stall Street, its sacrificial altar is seven metres below the floor of the Pump Room while its precinct extends beneath the modern city from the front of the Abbey to some way along Bath Street. Originally it would have been one of the grandest classical temples in Britain.

The original arrangement of the structure was simple and visually very effective. It was based upon two imaginary axes which crossed at right angles at which position the altar was built. On the main east-west axis lay the temple itself to the west of the altar, with a double arched monumental gate to the east. Thus a visitor approaching the precinct would first see the gate and beyond it the altar with the facade of the temple rising up behind. The north-south axis was designed to provide an exciting view from the main hall of the baths (where the Circular Bath was later installed) northwards across the sacred spring to the altar beyond.

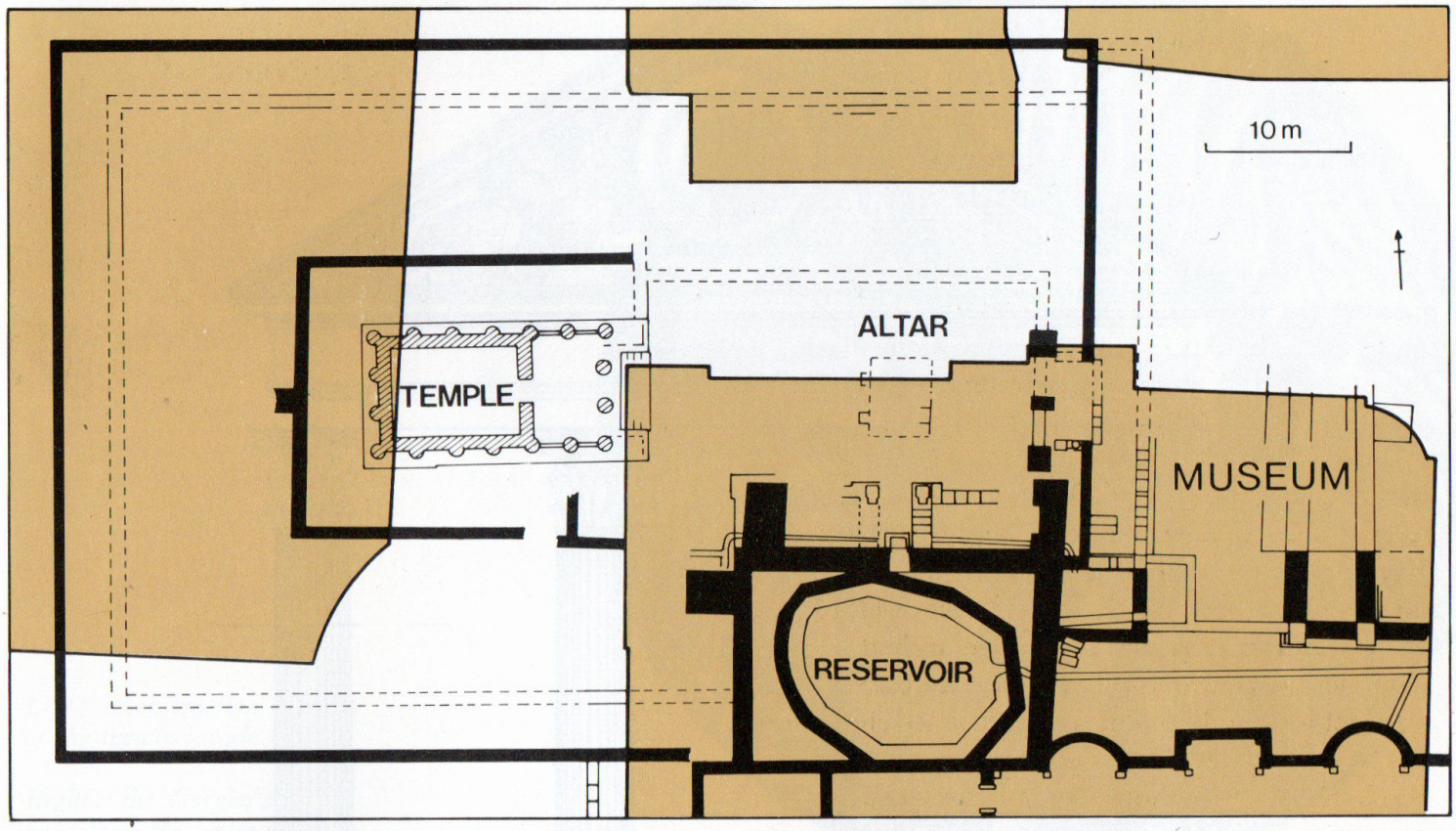
The entire temple complex was enclosed in a huge colonnaded precinct into the south east corner of which intruded the spring and reservoir. Within this outer enclosure lay a smaller colonnaded area surrounding the altar and delimiting the area between the temple front and the monumental gate. It is possible that this "inner precinct" was laid out first and that later, as the temple grew in importance, it was extended. Later still, possibly in the fourth century AD, the temple complex seems to have been considerably reduced in size, the temple itself being retained by a new enclosing wall while buildings of a more domestic nature were allowed to spread over parts of the original precinct.

One of the most important outstanding

The gilded bronze head of Minerva found beneath Stall Street in 1727.

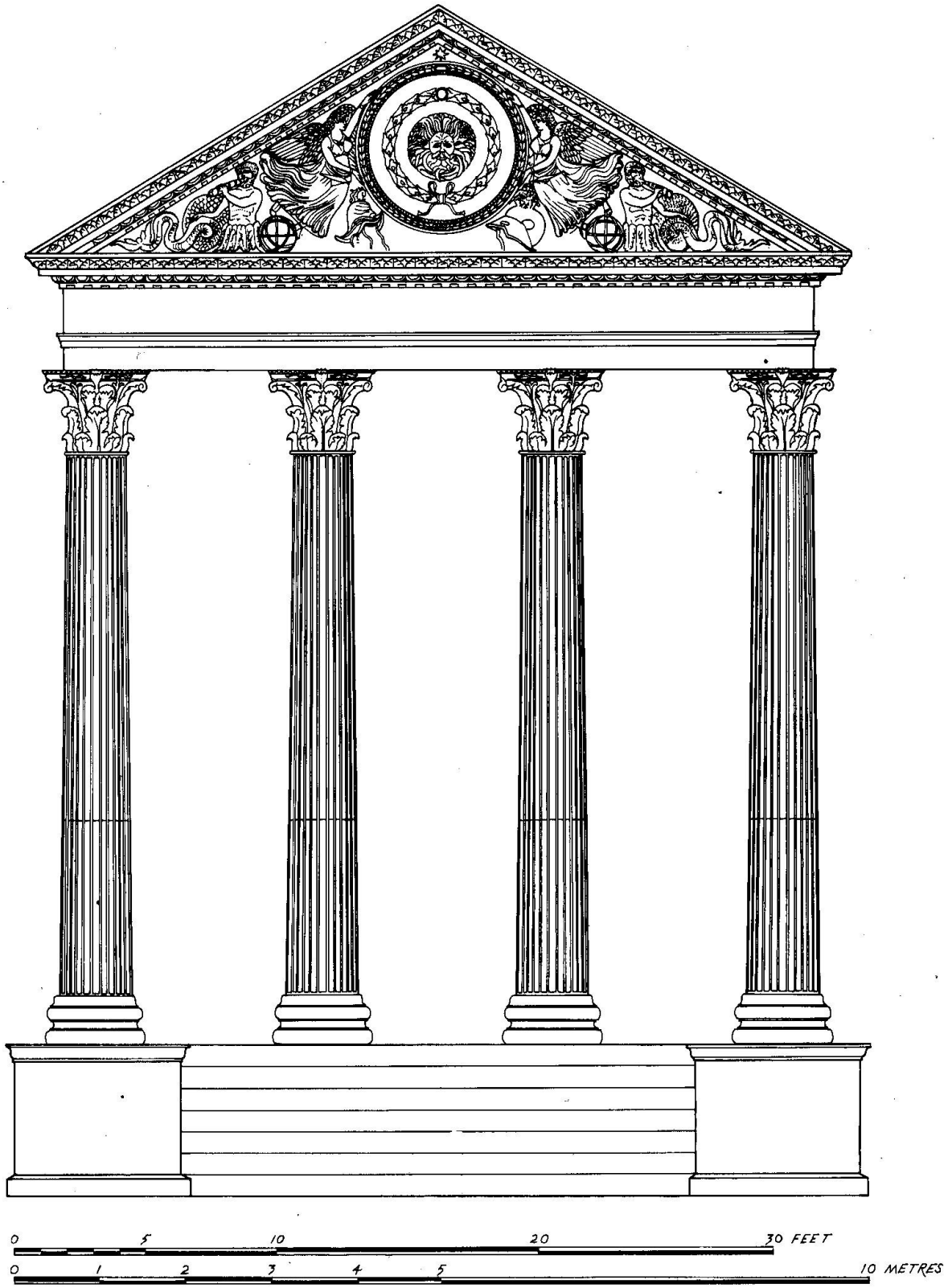
problems still to be answered is what kind of building lay to the east of the temple precinct in the area now occupied partly by the museum and partly by the western end of the Abbey. In terms of Roman town planning it could be either a forum, perhaps with a basilica beyond, or a theatre. The massive walls of the building, which can still be seen in the museum, give no clue to the original superstructure but the most likely answer is that the building was a theatre. Such an arrangement, a theatre and temple designed as part of a single concept, is quite common in France. In such a complex the theatre would have served as a place for religious performances closely connected with temple rituals. One day, perhaps, excavations in Bath will throw more light on this enigmatic structure.

Of the temple itself we now know a great deal. Part of the concrete podium (or platform) upon



which it was built was seen and recorded in 1868 and again in 1959, while details of its eastern foundations were noted in the excavations of the 1960s. From these observations we can establish its exact size, 20 metres by 10 metres – twice as long as it was broad – ideal proportions, the Roman architect Vitruvius tells us, for a classical temple. Knowing these measurements and being able to estimate the exact size of the pediment from the sculptured stones found in 1790 it is possible to say that the temple was tetrastyle (i.e. the pediment was supported on four columns). In such an arrangement one would expect the porch to have been two column spacings deep and the only acceptable plan, given these constraints, would have been for the *cella* (the part of the temple to contain the cult image of the deity) to occupy the remainder of the space, with the surrounding columns reduced to half columns attached to the *cella* wall.

The survival of so much of the temple facade resulted from the failure of the Roman drainage system. When the Roman architects began work on the baths they first had to contain the waters of the sacred spring and to provide a main outfall drain to take the overflow. All the while that the Roman outfall drain functioned efficiently there was no problem but as soon as the drain failed, as it must have done in the century of neglect following the end of Roman Britain (AD410), the spring water would have built up, flooding the central area to a depth of two or three metres and allowing a marsh to develop around the standing buildings. It was into this mire that the temple eventually collapsed – its sculptured blocks remaining largely safe from disturbance until workmen digging foundations came upon them in 1790.


0 5 10 20 30 FEET
0 1 2 3 4 5 10 METRES

Left: reconstruction of the temple facade.

Right: the Gorgon's head from the centre of the temple pediment.

The Temple Facade

The temple facade, with its magnificently carved pediment, is undoubtedly the most striking exhibit in the museum. The pediment is dominated by a roundel, representing a circular shield, upon which is displayed a Gorgon's head surrounded by a wreath. In classical mythology the Gorgon (Medusa) was a female whose hair was a tangled mass of serpents and the sight of whom turned the viewer into stone. But here at Bath, on the fringes of the civilized world, the classical Medusa was transformed into a male with drooping moustaches, depicted in the style of native Celtic art. It is a brilliant example of the conflation of Roman and native traditions.

The Gorgon's head shield is held aloft by two, purely, classical winged victories, of a kind one might find on any triumphal arch in Rome itself, while the corner angles of the pediment were filled with tritons (mythological sea creatures).

Below the shield are two helmets, the left hand one in the form of a dolphin, the right hand example supporting an owl standing on its crest, its wings held firmly by projecting hands. Helmets are often associated in religious art with Minerva while the curious little owl, a symbol of wisdom, is a reminder that among Minerva's many attributes she was also responsible for learning.

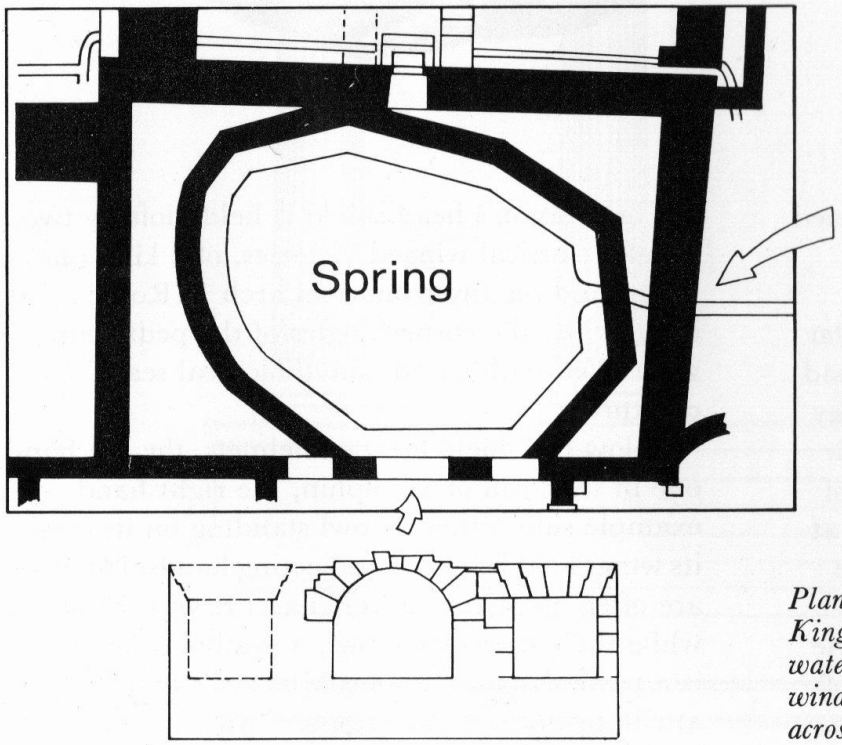
The Sacred Spring

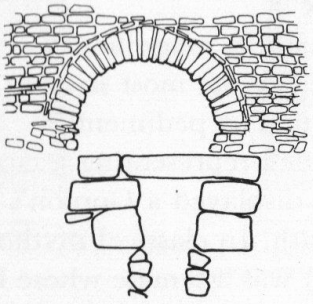
In the very centre of Roman Bath was the sacred spring and reservoir around which the major public buildings were erected. Water then, as now, gushed out of fissures in the ground at the rate of a quarter of a million gallons a day and at a temperature of *c*48°C. From here the water needed for the baths and the fountains was channelled off (pp. 22–23), while excess overflowed through an outfall drain which led ultimately to the river.

The reservoir itself, containing the steaming waters, was evidently meant to be seen. From the main hall of the baths the visitor would have been able to look across the spring through three large openings in the dividing wall. Two of these can still be seen today with the King's Bath beyond occupying almost exactly the site of the Roman reservoir but several metres above it.

Originally the spring seems to have been surrounded by a colonnade with ample space for people to walk up to the edge to view the water and to throw in offerings for the gods. Later, for some unknown reason, a massive enclosure wall was built around it with only one small entrance allowing pilgrims to glimpse the spring. It may, however, have been at this time that provision was made for people to see the water as it gushed out of the reservoir into the outfall drain. It seems that the drain was opened up and steps provided so that people could get close to the water perhaps even to drink it. This spot can be visited today and, when the water is flowing fast, provides a dramatic impression of conditions in the Roman period.

The Romans, like all subsequent visitors, have enjoyed throwing offerings into the spring in anticipation that the gods would favour them. When, last century, the spring and the outfall drain were excavated many of these offerings

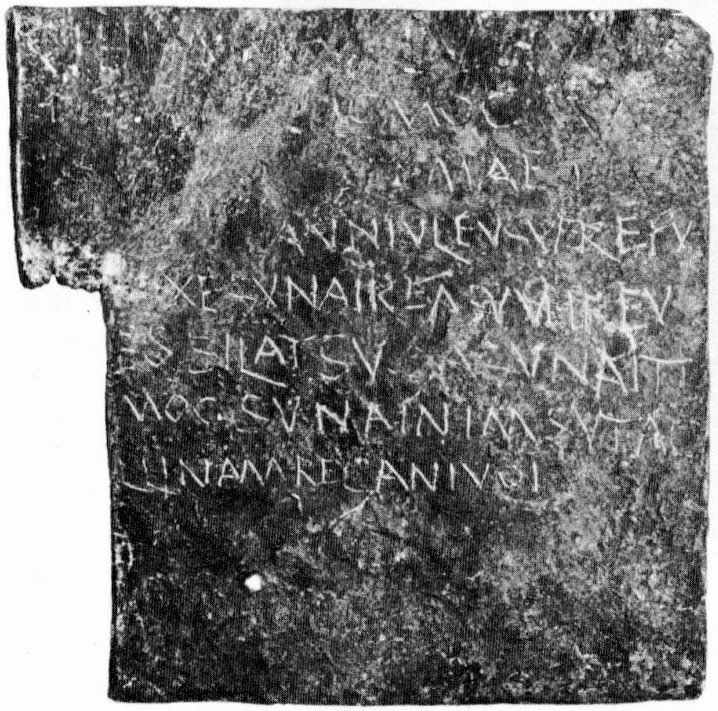




Plan of the sacred spring and reservoir now beneath the King's Bath. Still to be seen are the place where the water leaves the reservoir (above) and the great windows which once provided a view from the baths across the spring.

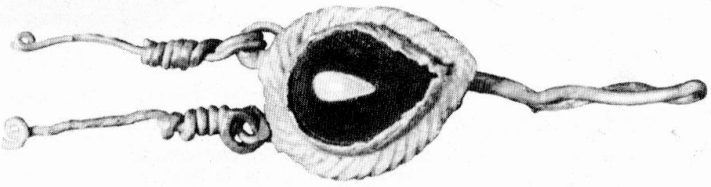
were recovered and are now exhibited in the museum. The most interesting is undoubtedly the lead curse (illustrated here) with its inscription written backwards so that only the gods would be able to read it. Another remarkable discovery was of a collection of thirty four gem stones, possibly a bag full thrown by the engraver into the waters in fulfilment of a vow. The thirteen pewter vessels described on the next page may also have been a single collection consigned to the waters by a grateful worshipper. In addition to these there were a large number of other small objects, a gold earring inset with a carbuncle, bracelets, brooches, armlets, dress pins and of course large numbers of coins spanning the Roman period. People, wealthy and humble alike, must have come from far and wide with their offerings to ask the gods for a favour or to thank them for some positive response to a wish.

Above: one of the hoard of gemstones. Red cornelian (12.5 x 10 mm). Discus thrower poised ready to throw. In front of him is a vessel containing a palm – the prize for victory.

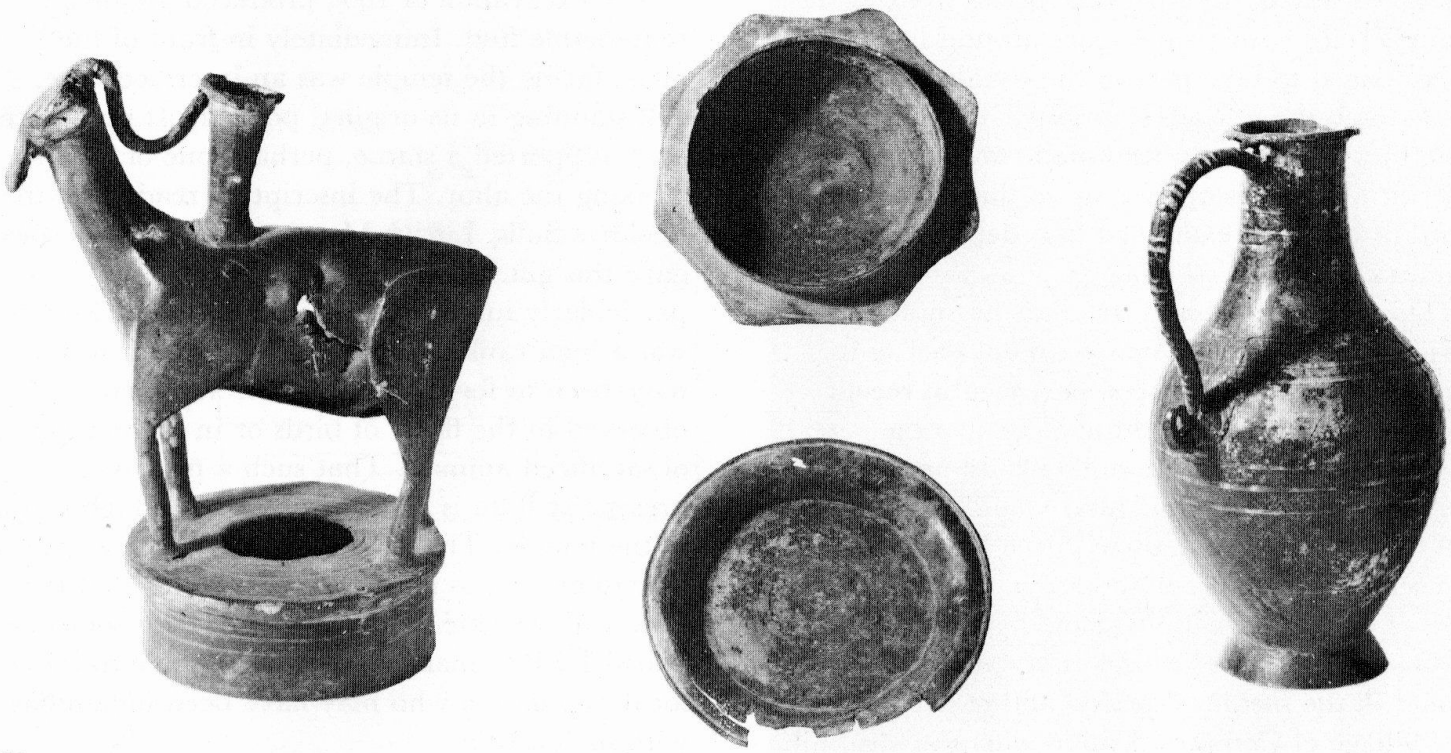


Lead curse from the reservoir inscribed "May he who carried off Vilbia from me become as liquid as the waters. (May) she who obscenely devoured her (become) dumb, whether Velvinna, Exspereus, Verianus, Severinus, Augustalis, Comitianus, Catusminianus, Germanilla or Jovina."

Gold ear-ring inset with a carbuncle.



Tin mask found in the culvert in 1878. It was probaby a ritual object associated with the temple (33 x 24 cms).



A selection of the pewter vessels found in the reservoir and the culvert.

Among the objects found in the reservoir and the outfall drain were thirteen pewter vessels: a flagon, two jugs, six bowls, three dishes and a candlestick – in fact the full range of tableware known to have been made in pewter at this time. Although the pieces were found over a wide area it is quite possible that they represent a single offering deposited together perhaps by one of the many local pewter manufacturers.

Bath seems to have been a centre for the pewter industry. To the north, on Lansdown, and to the south, at Camerton, excavations have produced clear evidence of the manufacturing processes involved. Most objects were cast in a number of pieces in stone moulds and then, after further working, assembled by soldering the individual pieces together. The Bath district was a convenient location for the industry for not only was it close to the lead, brought by road from Mendip, and tin shipped by sea and river from Cornwall, but the local limestone was admirably suited to the fine working necessary to make the moulds. From these local manufacturing centres, scattered in the countryside around, the finished tableware would have been brought to Bath for wider distribution.

The museum possesses a fine collection of stone moulds found in the excavations on Lansdown early this century. A wide range of objects from tableware to small trinkets was evidently being manufactured here, presumably very much as a cottage industry by a community otherwise heavily engaged in agriculture.

The sacrificial altar

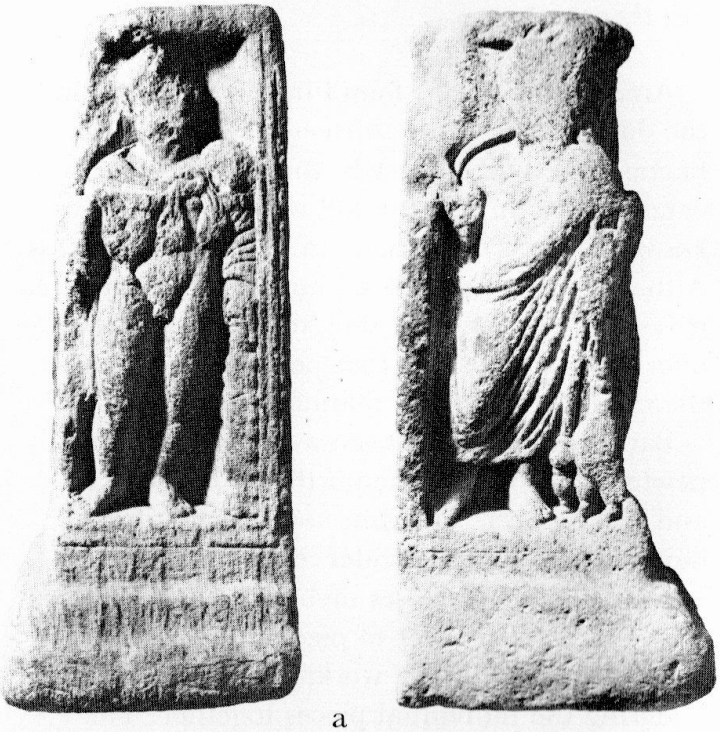
The altar lay in an open precinct in front of the temple steps with ample space around it for those who wished to take part in the rituals to stand and watch the officiating priest. Upon the altar offerings would have been made to the deity and sacrificial animals opened up so that their entrails could be examined in order to foretell future events.

The exact location of the altar has now been established below the Pump Room, part of it surviving in subcellars and part seen in recent excavations. It consisted quite simply of a stepped platform of limestone blocks upon which the solid masonry of the altar would have stood. Of the superstructure three of the four ornately carved corner blocks now survive together with one of the corner capping stones.

One of the corner blocks (not exhibited) was found in the medieval period and carted out to the village of Compton Dando where it was built into an external buttress of the church. Although very weathered it is still possible to make out its two carved faces, one representing Apollo playing a lyre, the other a naked male deity (possibly Hercules) holding a club.

The two corner blocks, now in the museum, were found more recently, one in 1790 the other in 1965. Both were carved with one deity on each of the two exposed adjacent faces. The 1790 block depicts Hercules Bibax, naked except for a lion's skin cape, holding a wine cup in one hand and a knobbed club in the other. His partner is Jupiter dressed in a toga and holding a trident. The 1965 corner block is carved to represent a naked Bacchus holding a staff and pouring wine from a cup to a panther squatting at his feet, while on the other side is a heavily draped female supporting a cornucopia and pouring a libation. She must be a fertility goddess but exact identification is not possible. The fourth corner probably still lies somewhere nearby.

The excavation of 1965 produced another remarkable find. Immediately in front of the altar, facing the temple was an inscribed base, still standing in its original position. It may once have supported a statue, perhaps one of a pair flanking the altar. The inscription reads "To the Goddess Sulis, Lucius Marcius Memor, haruspex, gave this gift." The word 'haruspex' is particularly interesting for it tells us that Memor was a high ranking augurer whose job it would have been to fortell the future from omens observed in the flight of birds or in the entrails of sacrificed animals. That such a man was present at Bath is an indication of the high status of the temple. The actual carving of the word 'haruspex' is also informative. It seems that the carver abbreviated it as HAR but later someone added USP to make it more intelligible to the local population who may have been unfamiliar with such a title.



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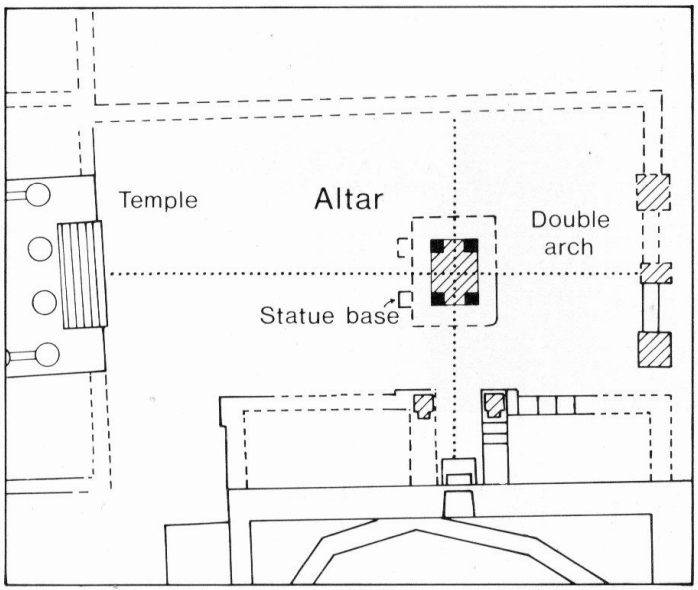
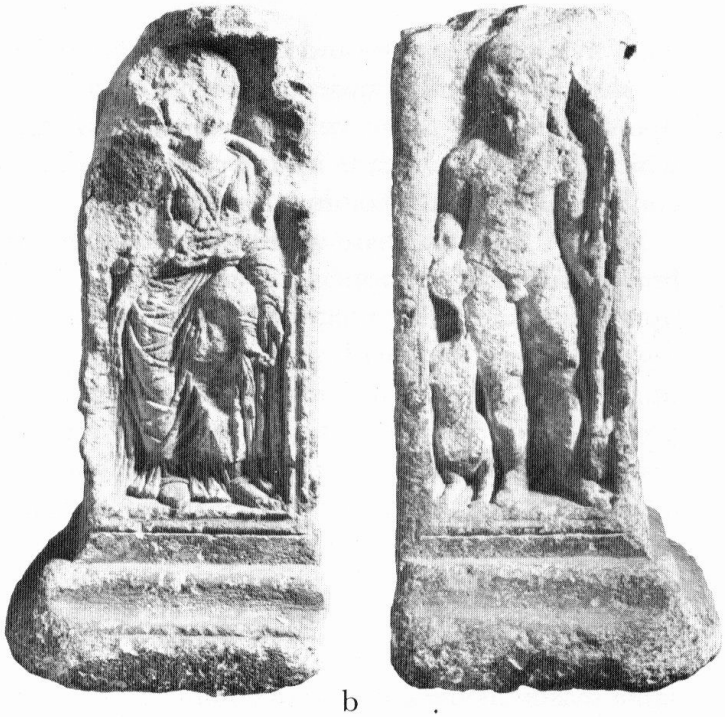


Below: altar corner blocks.
a, *found in 1790*; b, *found 1965*; c, *at Compton Dando.*



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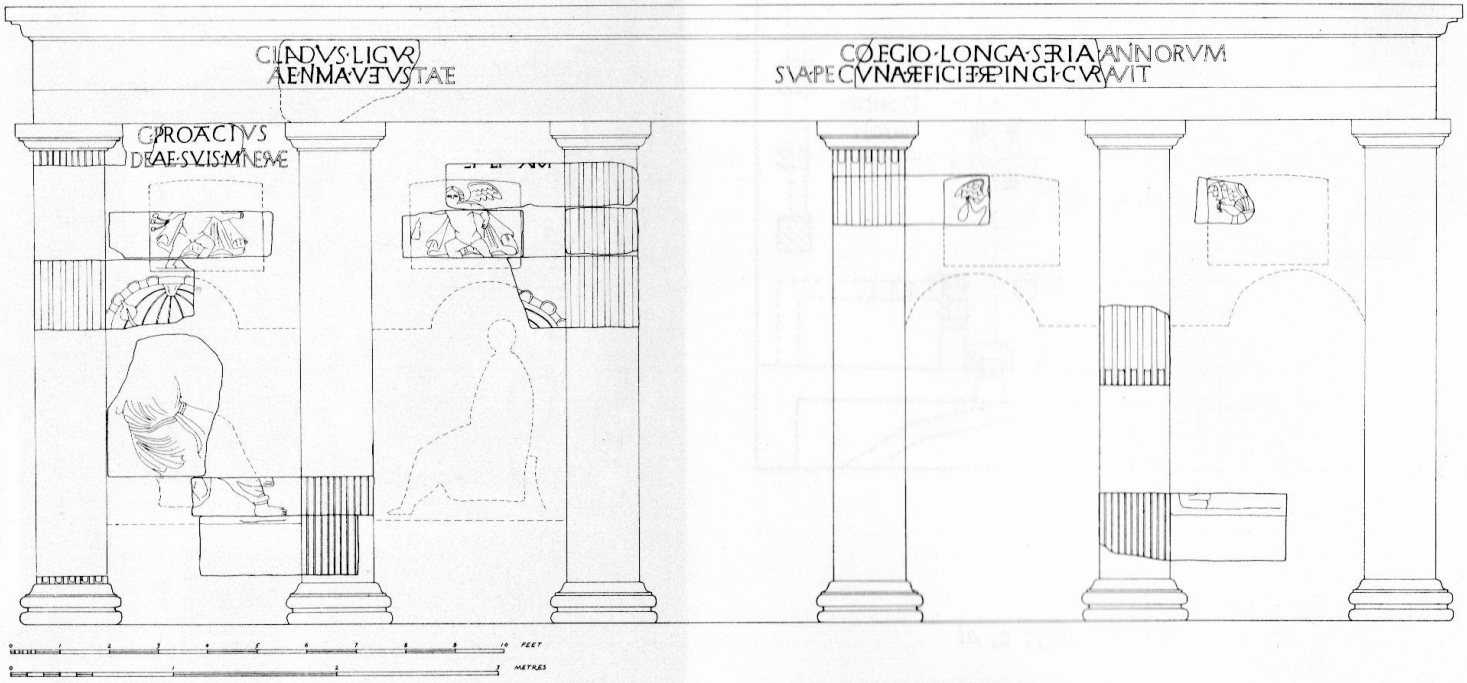


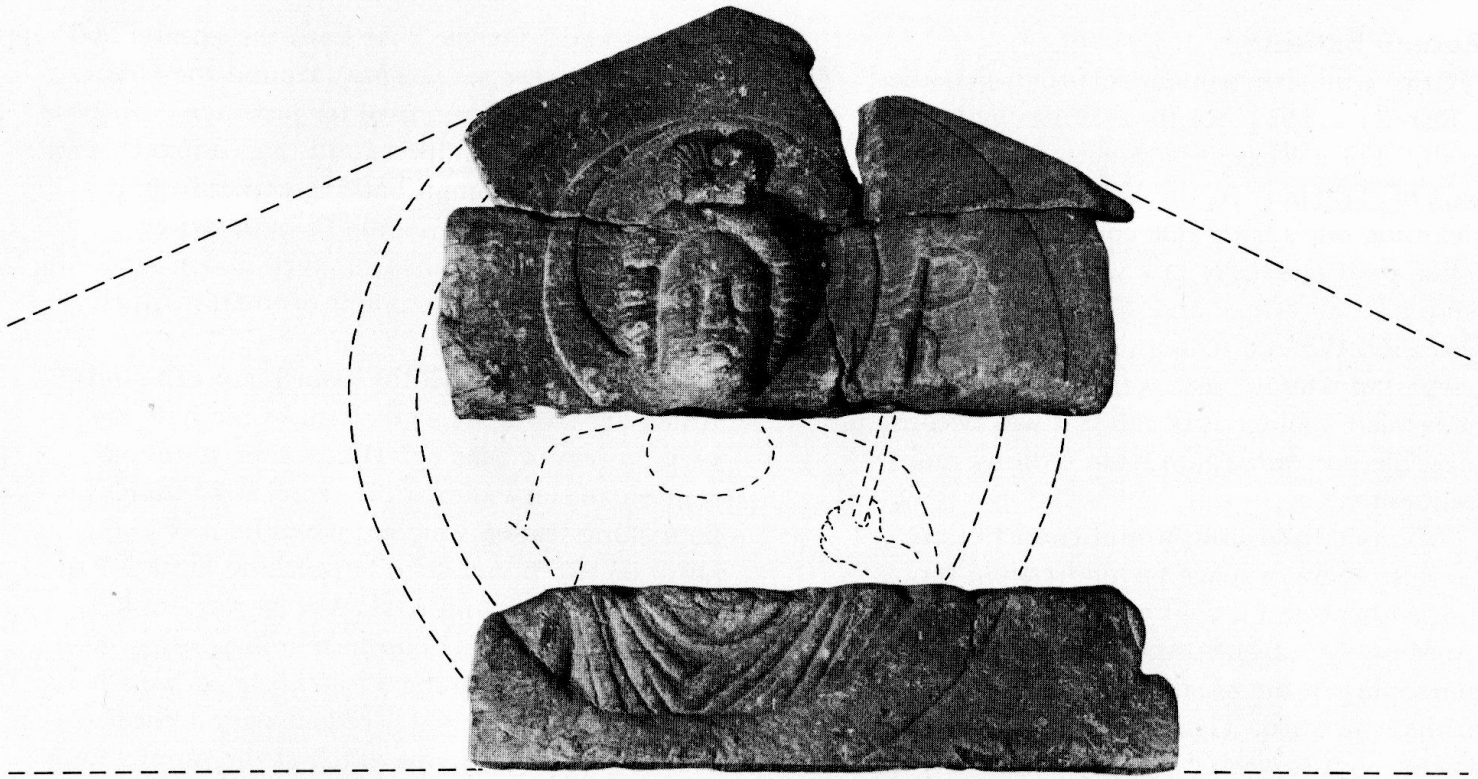
The Facade of the Four Seasons reconstructed.

The Facade of the Four Seasons

One of the most puzzling of the Roman monuments discovered in Bath is the so-called Facade of the Four Seasons – a wall face nearly 9 m in length sculptured to represent a colonnade of regularly spaced fluted pilasters with the intervening wall space enlivened with niches containing figures. Parts of the building have come to light from time to time in excavations beneath the Pump Room but we do not yet know where it originally stood or what was its function. Further excavations beneath the Pump Room may however throw light on this intriguing problem.

Several attempts have been made to reconstruct the facade from the surviving pieces but only recently has it been possible to offer a scheme which takes into account every surviving detail. The illustration above (and the actual reconstruction in the museum which is based upon it) suggests that a central doorway existed which divided the facade into two sections each containing two inter-columnar wall faces.

It is evident that these wall faces were divided horizontally into an upper and a lower tier, the upper tier containing rectangular panels, the lower, niches roofed with shell canopies. The upper panels each contained a winged cupid provided with the attributes of one of the four seasons, Spring holds a bunch of flowers, Summer a sheaf of corn, Autumn a bunch of grapes and Winter a billhook. Of the seated figures below we know very little, but the left hand female appears to be associated with a bud which might suggest that she too was Spring representing the same season as the cupid above her.



The Luna pediment.

The upper part of the monument bears two inscriptions, one above the cupids between the column capitals, the other along the frieze. The only surviving fragment of the lower inscription reads "*C. Protacius . . . deae Sulis Minervae . . .*" thus demonstrating that the monument was in some way associated with the goddess. The upper inscription is too incomplete to allow a full interpretation but it refers to Claudius Ligur . . . , mentions "excessive age" and a "long sequence of years" and states that "at his own cost had it repaired and repainted." The implication would seem to be that Claudius Ligur . . . was in some way associated with the renovation of an old building, probably the very structure of which the facade formed a part.

The other monument illustrated here is a pediment decorated with a large central roundel bearing a representation of the goddess Luna, clearly recognizable from the crescent moon behind her head and the riding whip which she carried in her left hand – the whip she needs to control the horses of the *biga* (two horse chariot) in which she rides across the night sky. It is particularly appropriate that Luna should be revered at Bath for she is frequently found in association with the sun god, Sol, in all probability a Roman counterpart of the native Sulis.

Where the Luna pediment stood is yet unknown but one distinct possibility is that it formed part of the same monument as the Facade of the Four Seasons and occupied the attic storey above the central doorway. We will never know for certain – all that can be said is that its proportions would allow it to fit in such a position.

Roman Bathing

"Baths, wine and women corrupt our bodies" a Roman wrote, "but these things make life itself." For a Roman bathing was an essential part of existence. At the baths in addition to cleansing one's body one could take exercise or relax, read or simply talk with friends. The baths were a social centre and daily bathing was a necessity. When a Roman was once asked by a barbarian why he visited the baths once a day he replied apologetically that it was because his busy life prevented him from bathing more frequently.

A simple bath suite would consist of an exercise court, a space for undressing, rooms of graded heat and a cold plunge bath. Regimes could be varied but usually one began by undressing in the *apodyterium* before taking exercise in the courtyard. Then one would go into the warm room (*tepidarium*) and perhaps stay for a while before proceeding to the intensely hot room (*caldarium*) where the hot damp atmosphere would promote profuse sweating. Here the body would be oiled and scraped clean with a strigil. When this stage was over the bather would return once more to the *tepidarium* to cool down a little before taking a plunge in the cold pool in the *frigidarium.*

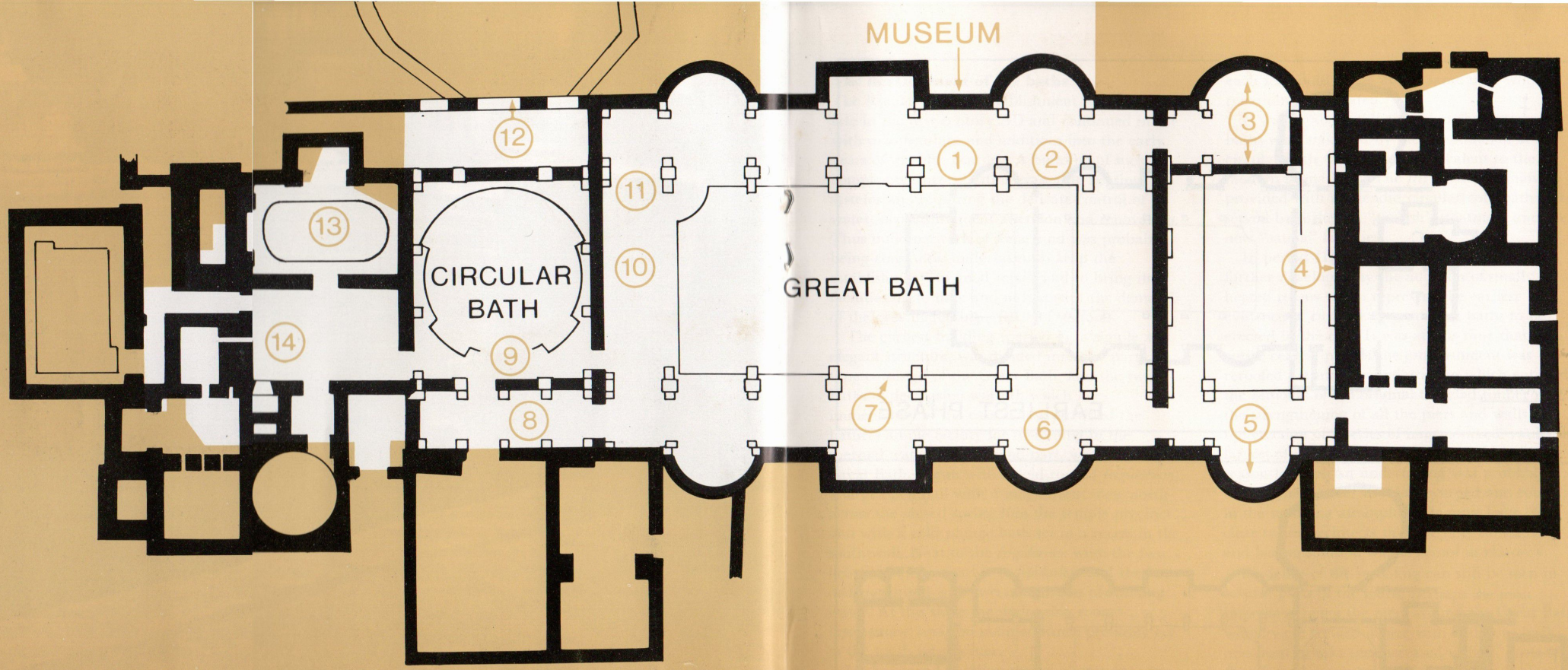
This was bathing at its simplest. At larger establishments a whole range of additional facilities would be provided. The baths at Bath offered a great swimming pool filled with warm water and immersion baths where one could sit up to the neck in the hot curative waters. Nor must we forget the recreational facilities attached to the major establishments. The Roman architect Vitruvius tells us that it was necessary to provide large colonnaded courtyards. "In these colonnades," he says, "construct spacious recesses with seats in them where philosophers, rhetoricians and others who delight in learning may sit and converse." At Bath the apsidal and rectangular recesses (*exedrae*) around the Great Bath could have been used for just such a purpose.

The most vivid impression it is possible to gain of the spirit of Roman bathing comes from a description left to us by the Roman writer Seneca. As a young man he lived above a bathing establishment and complains of the din which disrupted his studies.

"Picture to yourself the assortment of sounds, which are strong enough to make me hate my very powers of hearing! When your strenuous gentleman, for example, is exercising himself by flourishing leaden weights; when he is working hard, or else pretends to be working hard, I can hear him grunt; and whenever he releases his imprisoned breath, I can hear him panting in wheezy and high-pitched tones. Or perhaps I notice some lazy fellow, content with a cheap rub-down, and hear the crack of the pummelling hand on his shoulder varying in sound according as the hand is laid on flat or hollow. Then, perhaps, a professional comes along, shouting out the score; that is the finishing touch. Add to this the arresting of an occasional roysterer or pickpocket, the racket of the man who always likes to hear his own voice in the bathroom, or the enthusiast who plunges into the swimming tank with unconscionable noise and splashing. Besides all those voices, imagine the hair-plucker with his penetrating, shrill voice – for purposes of advertisement – continually giving it vent and never holding his tongue except when he is plucking the armpits and making his victim yell instead."

(Seneca *Epist* LVI)

Right: the Great Bath.



1. *The Great Bath. The centre piece of the establishment. Intended for swimming.*

2. *The drain which allows the Great Bath to be emptied. Originally fitted with a bronze sluice gate.*

3. *Semicircular bath inserted into a recess. A patient could sit on the seat immersed up to his neck in the curative waters.*

4. *The eastern baths. A complex of heated rooms which were considerably modified over the years. Possibly originally designed as baths for females. They overlie an earlier swimming bath.*

5. *Semicircular bath lined with pink mortar.*

6. *The alcoves of the Great Baths, originally designed to allow onlookers to sit in comfort away from the splashing bathers, are now used to display architectural details belonging to the baths, recovered during the excavations.*

7. *Drip gully cut in the original floor to return water, shaken off emerging bathers, to the bath.*

8. *Corridor with much of its Roman masonry still in position.*

9. *The Circular Bath, a cold plunge bath, was built in the second period and remained in use throughout.*

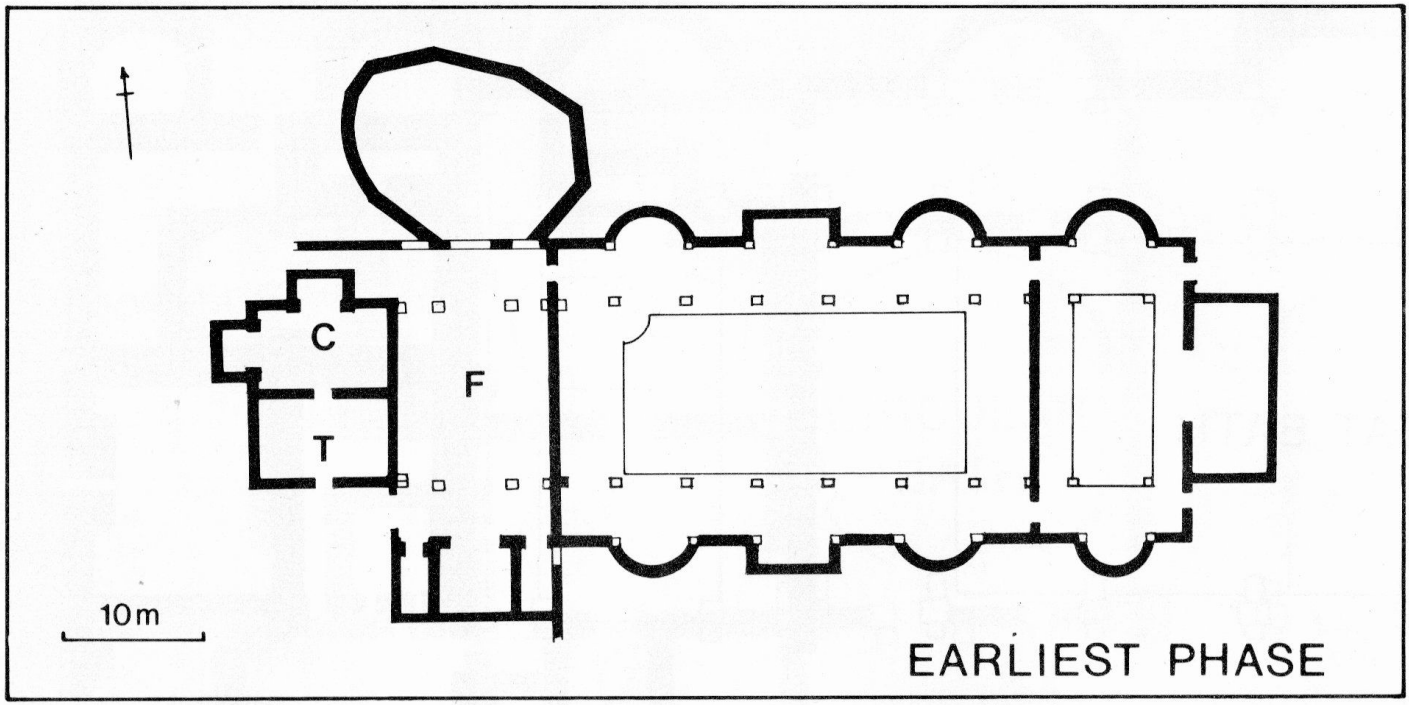
10. *Part of the huge vault which once roofed the Great Bath. The ends were open to allow steam to escape.*

11. *The culvert by which the hot mineral waters entered the bath. Originally it was lined with lead.*

12. *Roman windows giving a view across the spring and reservoir to the sacrificial altar beyond. The present King's Bath lies above the Roman reservoir.*

13. *Oval swimming bath built late in the history of the establishment to serve as a cold bath for the heated rooms to the south.*

14. *Well preserved hypocaust for a hot room (caldarium). The actual floor would have been supported on the brick pillars (pilae).*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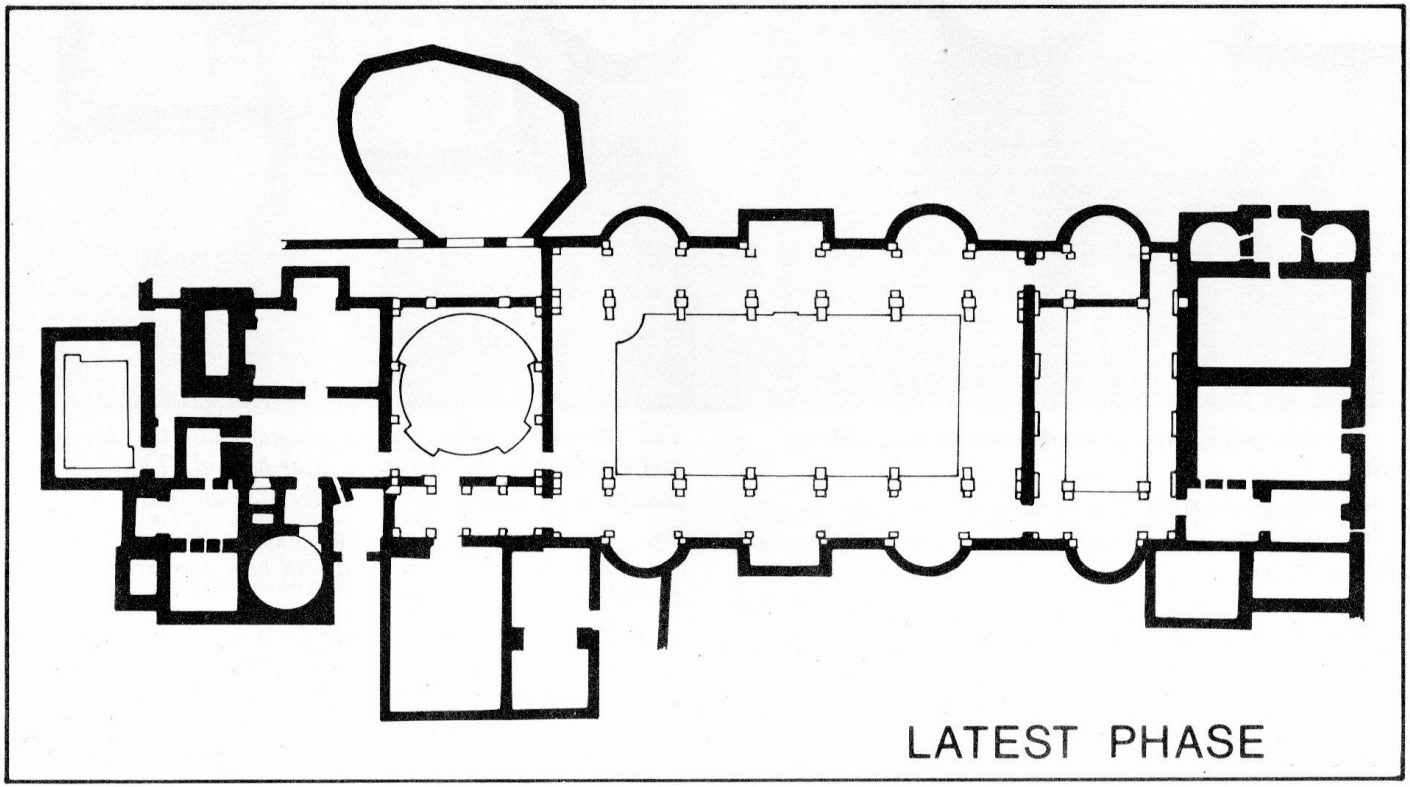

LATEST PHASE

The development of the baths

The Roman bathing establishment was erected late in the first century AD and continued in use with modifications and additions into the early years of the fifth century. A building of such complexity, incorporating elaborate heating systems and requiring the delicate control of water, needed frequent attention and renovation. Thus building work of some kind was probably being constantly undertaken to keep the establishments in good repair and to bring its facilities up to date and in line with the demands of the ever increasing stream of visitors.

The earliest building (period I), a simple and elegant structure, was divided into two parts. One consisted of the Great Bath, and the two baths of decreasing warmth which lay immediately to the east. These provided the bathers ample facility for swimming in the thermal waters. The second part, west of the Great Bath, began with a cold room (*frigidarium*), a large open hall with a magnificent view north across the sacred spring into the temple precinct and with a cold plunge bath set in a recess in the south wall. Next to the *frigidarium* were the two heated chambers, a warm *tepidarium* and the hot *caldarium* fitted with two small baths of scalding water. At this stage the undressing room (*apodyterium*) and the main entrance probably lay in the south west corner.

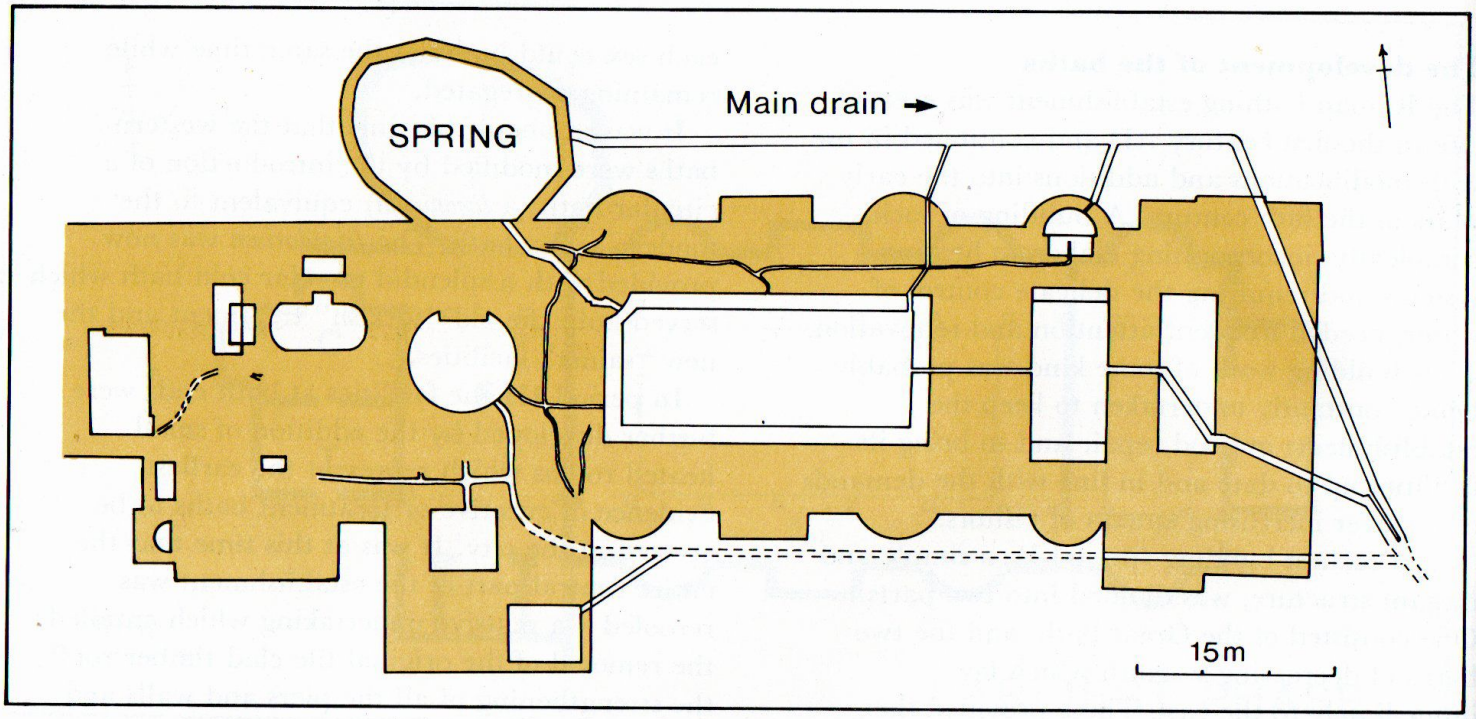
In the second building period alterations were made at each end. At the east end the eastern-most swimming bath was replaced by a new suite of heated rooms thus doubling the capacity of the establishment. One interesting possibility is that this change may have been occasioned by an edict issued by the Emperor Hadrian which forbade mixed bathing in the interest of public morals. Some establishments responded by opening at different times for men and women. Others, like Bath, increased their facilities so that each sex could bathe at the same time while remaining segregated.

It was at about this time that the western baths were modified by the introduction of a circular bath (a *laconicum*) equivalent to the modern sauna bath. The *frigidarium* was now provided with a splendid circular cold bath which served both the old "turkish" treatment and the new "sauna" facilities.

In period III the facilities at both ends were further developed by the addition of small heated rooms which represent the earliest evidence of curative or treatment baths to be erected in the city. It was at this time that the entire central part of the establishment was reroofed – a massive undertaking which entailed the removal of the original tile clad timber roof, the strengthening of all the piers and walls and the erection of a series of huge concrete vaults the largest of which spanned the Great Bath. The reason for such an undertaking was probably that the original timber roof had warped and rotted in the steaming atmosphere. It must have been clear to the architects that the only satisfactory and lasting solution was to reroof in masonry.

Evidence of the reroofing can still be seen in several parts of the baths, perhaps the most impressive being the piers around the Great Bath which were trebled in size with additions back and front to take the increased weight. Parts of the tile and concrete vault are also on display.

Period IV was a time of extensive modifications The east baths were totally rebuilt on a grand scale while at the west end it appears that a completely new set of baths were added, including a new swimming bath. Thereafter the baths continued to function until some time in the fifth century when the drainage system broke down and a marsh began to develop into which the crumbling superstructure was eventually to fall.



Water and plumbing

The control of the water supply of the baths shows Roman engineering at its best. The entire system of supply and drainage was carefully planned and maintained to a degree of high efficiency.

The enormous volume of spring water which poured out of the earth at the rate of nearly a quarter of a million gallons a day posed considerable problems, but once the spring had been contained and the reservoir built the water could more easily be controlled. The first problem was to provide a sufficiently large outfall drain to carry off excess water. This drain, which can be seen in part today, is a most impressive structure. It is built of masonry with a plank-lined culvert in the bottom and is large enough for a man to walk along. At intervals where subsidiary drains entered or where directions changed manholes were provided to allow easy access for cleaning and maintenance.

The Great Bath was served with hot water direct from the spring carried through a box drain of lead set in a channel cut into the stone paving. Although the lead lining has been removed hot water still enters the bath by means of the original channel. From the Great Bath water passed to the two subsidiary baths adjacent to it, but additional provision was made for emptying it through a sluice in the north east corner.

Another major drain flowed along the southern side of the establishment to carry off waste water from the western baths. With all the changes in plan which have taken place in this area, however, the details have not been fully worked out. Nor has it yet been possible to define the means by which the cold water supply for the cold baths was provided.

In addition to the major systems of supply and drainage smaller diameter lead pipes supplied water to other parts of the establishment. One pipe (now represented only by the slot in which it had been laid) ran to the south west corner of the Great Bath chamber, probably to a hand basin, while waste was led off into the bath.

Top: stamped lead pipe from the baths (the letters are of unknown significance) and sections of lead pipes.

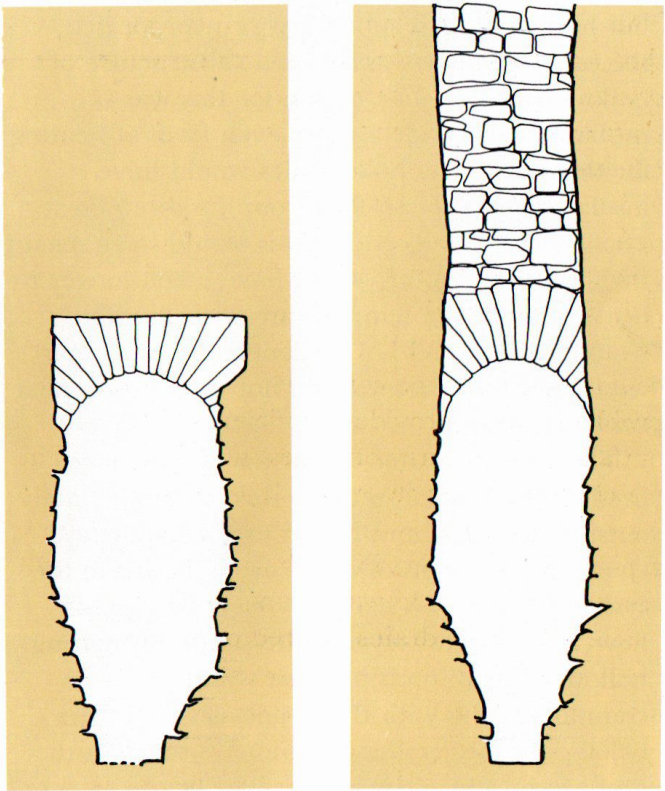
Left: stamped pig of lead.

Below: sections through the main drain: note the timber lined culvert in the bottom.

Another branch of the same pipe (still magnificently preserved in position) ran along the north side of the baths one branch serving a fountain the other leading to an immersion bath set in one of the apsidal recesses.

Colossal quantities of lead were used in the baths, the source almost certainly being the Mendip mines which were extensively worked in the Roman period. Lead was transported in large blocks or pigs one of which was found near Sydney Place in 1809. The mould in which it had been cast was inscribed IMP HADRIANI AVG showing that the pig was manufactured in the imperial mines during the reign of Hadrian early in the second century AD.

The entire floor of the Great Bath is still lined with its original Roman lead sheeting 2.5 cm thick. Some 86,000 kgs ($8\frac{1}{2}$ tons) of lead would have been required, equivalent to between 90 and 100 lead pigs. In all, the establishment would have needed about twice as much lead to complete all its fittings.

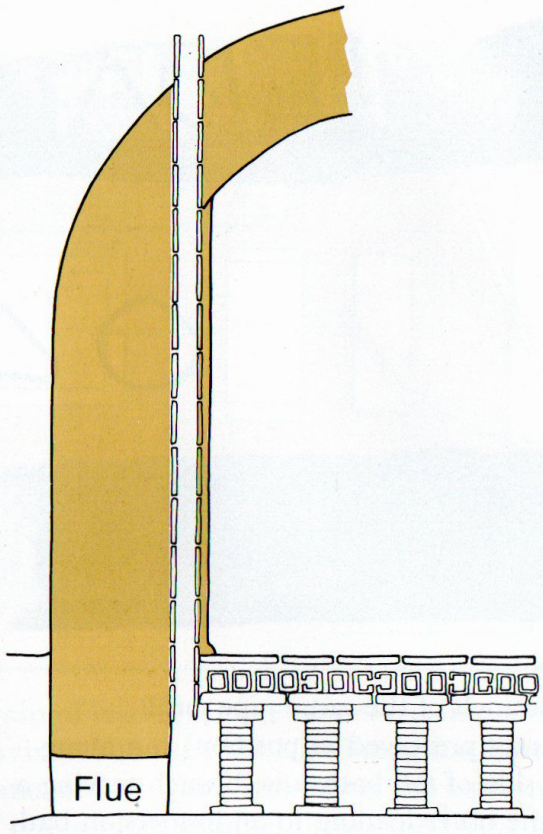


Heating systems

In early Roman bathing establishments the only form of heating was provided by charcoal braziers placed within the rooms, but from the beginning of the first century BC a new type of heating system was introduced which involved forcing hot air to circulate in spaces beneath the floors and ducts set within the walls. The use of these hypocaust systems, as they were called, had become widespread by the time that the baths were built in Bath.

A fine example of a hypocaust can be seen in the west end of the baths. Here the basement floor, of a hard pink waterproof mortar, formed the foundation for rows of brick *pilae* which in turn supported an upper, or suspended, floor. In most buildings this upper floor would have consisted simply of a layer of concrete with some kind of surfacing, perhaps mosaic work or flags, but here an added subtlety was incorporated – the concrete floor was set on a substructure of hollow box tiles. The reason for this was probably to provide a more even form of heating for the room. The hollow tiles would have insulated the floor surface from the direct heat applied to the underside. This would have meant that, while the room would have taken longer to heat up, once the temperature was raised it would have stayed hot for longer and the floor would not have become too hot to stand on near the heat source.

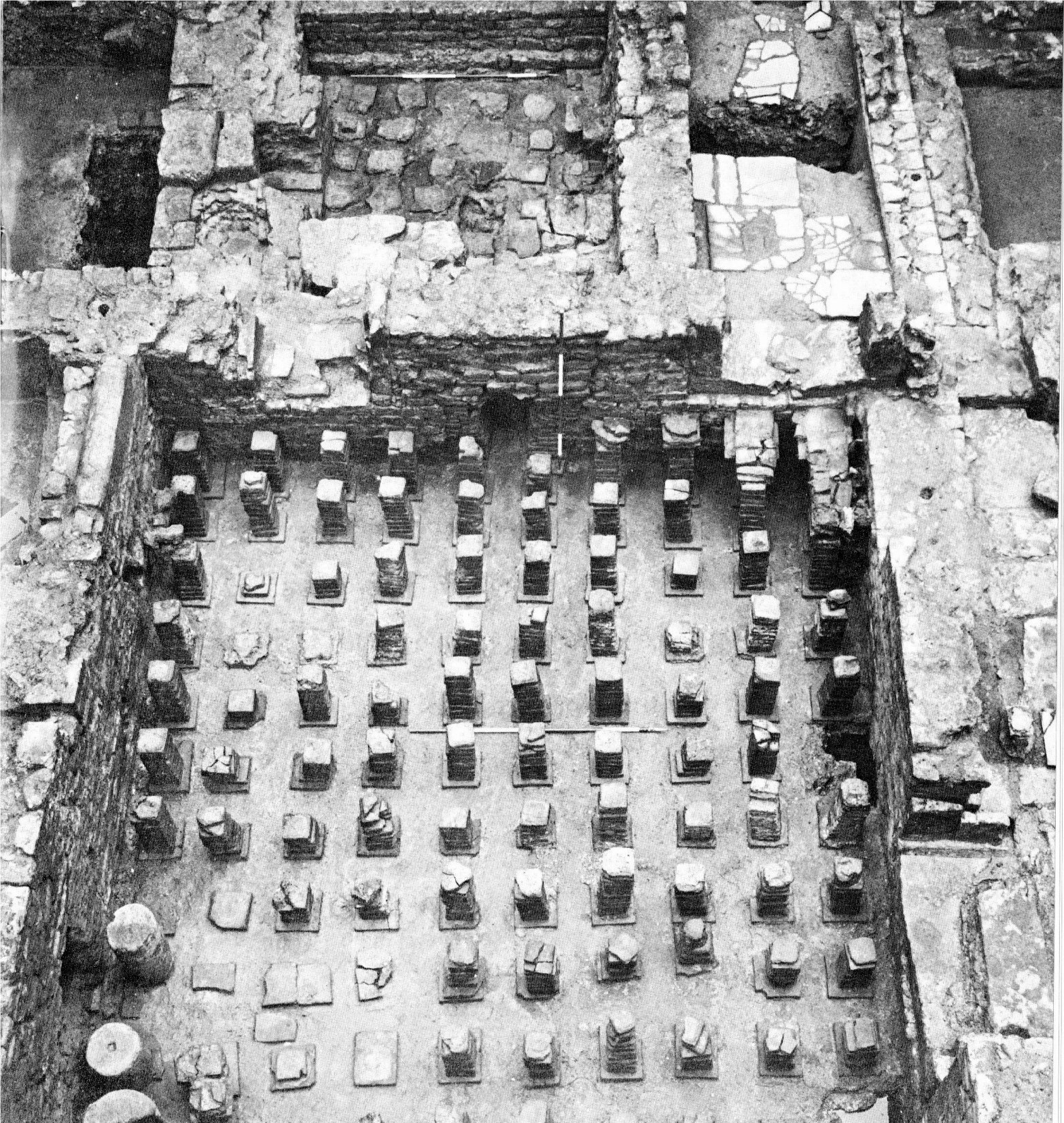
The air was heated by means of a furnace, fired with charcoal, set in a stokery immediately outside the room and linked to the hypocaust chamber by means of a flue arch. To make the system work it was necessary to create an air flow. This was achieved quite simply by setting hollow vertical ducts into the walls, communicating with the hypocaust chambers below, and projecting as chimneys through the roof above. Once the hot air had begun to enter



the hypocaust it would tend to rise through the ducts thus creating a sufficient draught to draw more in from the flue. In this way hot air would circulate beneath the floor and the room would begin to heat up.

A minimum number of vertical ducts were essential to the efficient functioning of the system but by increasing their number the overall temperature of the room could be increased. In the case of the room here illustrated the entire wall surface had been jacketed in box tiles showing that the intention had been to create an intensely hot atmosphere.

If hot water was needed, as it was in most *caldaria* for the basins or the baths, it was usually provided by a bronze boiler set on supports above the furnace. By the time the baths were built at Bath the science of central heating had been brought to a high degree of perfection.

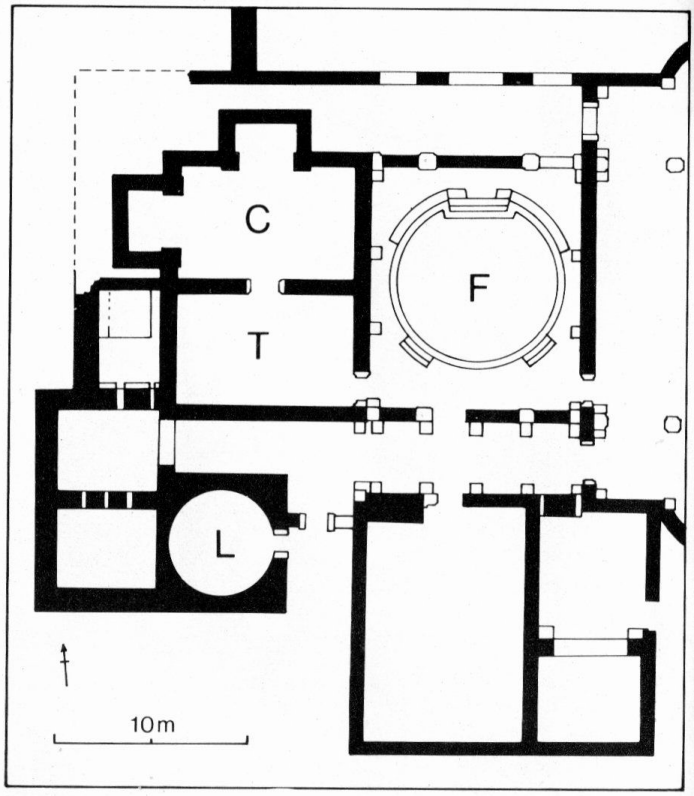


The use of the baths

For most of its life the Roman bathing establishment provided two principal facilities: the usual rigorous form of heat treatment in the east and west baths, together with the added luxury of a gentle swim in the warm waters of the Great Bath and a relaxing stroll along the surrounding porticos. But as might be expected, in a bathing establishment as important as this, the range of heat treatment offered was far more varied than was usual.

The west baths, after their third period of restoration, provide an excellent example of the facilities offered. If one wanted a conventional bath one would strip in the changing room (*apodyterium*), perhaps take exercise, then stroll through the *frigidarium* to the *tepidarium*, linger a while and then proceed to the *caldarium* for oiling and cleaning, ending the regime with a dip in the *frigidarium* – much as we have outlined already above (p. 16). But the more adventurous after exercising might go straight to the *laconicum* to sit for a while in the intensely hot atmosphere before taking an invigorating plunge in the cold water of the *frigidarium*. Yet another facility, involving immersion in the healing waters, could have been obtained in the rooms reached along the corridor between the *tepidarium* and the *laconicum*. Such a treatment would probably have been taken in combination with one of the others A further variation, of course, might have added a swim in the Great Bath.

Thus to the visitor, the baths would have offered a range of activities to suit his mood, his age or his infirmities. It is not difficult to appreciate why bathing formed an essential part of civilized daily life.

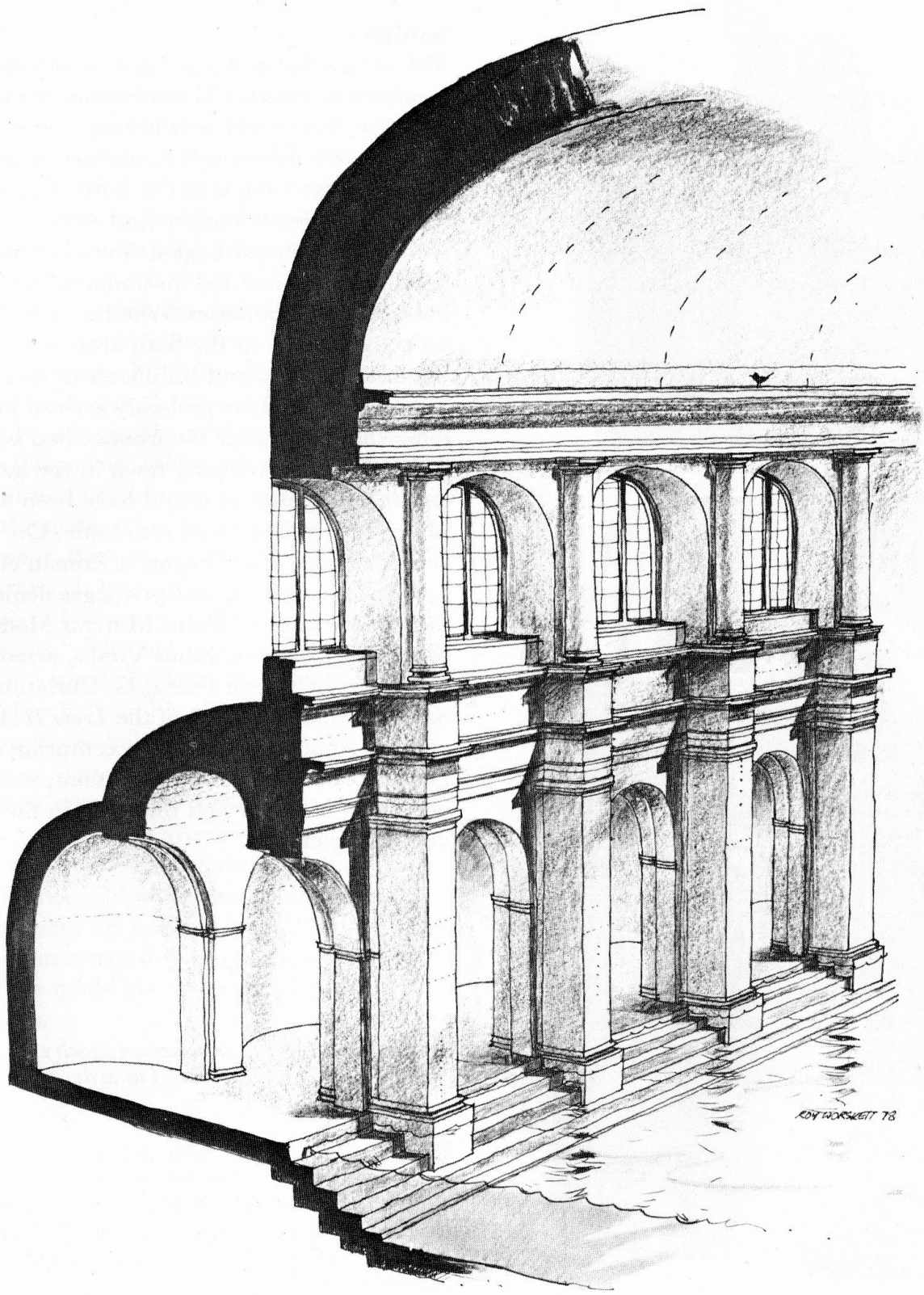


The west end of the baths.
C *caldarium*; T *tepidarium*; F *frigidarium*; L *laconicum*.

Sunshine, the best of remedies, we can administer to ourselves, as we can the vigorous use of towels and scrapers. To bathe the head with hot water before the hot steam of the bath, and with cold water after it, is understood to be very healthful.

Pliny, *Natural Histories* XXVIII, 55

Right: artist's reconstruction of the Great Bath as it would have been in period II sometime in the third century AD. Drawn by Roy Worskett.


ROY WORKETT 78

Soldiers

The cemeteries of Aquae Sulis have produced a surprising number of tombstones of soldiers. Of these, four could well belong to the early years immediately following the conquest when there is likely to have been a fort at Bath. Two of the men, M. Valerius Latinus and Antigonus, served with the Twentieth Legion: the other two, L. Vitellius Tancinus and an unnamed soldier were both cavalry auxiliaries. Whether they died while on active service in the Bath area or settled near the fort on retirement is difficult to say.

The other soldiers probably arrived in Bath somewhat later, after the frontier had been moved forward. The developing town in the late first and second centuries would have been an ideal place for a retired veteran to settle. On retirement a soldier became a Roman citizen and such men had rights and privileges denied to most of the natives. Gaius Murrius Modestus of the *Legio II Adiutrix*, Julius Vitalis, armourer of the *Legio XX Valeria Victrix*, G. Curiatius Saturninus, a centurion of the *Legio II Augusta* and M. Aufidius Maximus, a centurion of the *Legio VI*, all attested on inscriptions, would have been men of power and influence in the developing city.

Upper: tombstone of an unknown cavalry auxiliary found in Grosvenor Gardens. The style is typical of cavalry tombstones.

Lower: tombstone of cavalry auxiliary shown trampling an enemy. The inscription reads "Lucius Vitellius Tancinus, son of Mantaius, a tribesman of Caurium in Spain, trooper of the Cavalry Regiment of Vettones, Roman citizen, aged 46, of 26 years' service, lies buried here."

Civilians

The inscriptions from Bath are fascinating for the wealth of information they give about the local inhabitants. The retired centurion M. Aufidius Maximus was evidently a man of substance able to give freedom to two of his slaves Aufidius Eutuches and Marcus Aufidius Lemnus, each of whom erected altars in his honour in the temple. It was common for freed slaves to take the name of their masters as these two did. Manumission (the granting of freedom to slaves) is recorded on the tombstone of an old priest, Gaius Calpurnius Receptus, who died at the age of 75 after serving in the temple of Sulis. His tombstone was erected by his wife Calpurnia Trifosa who had once been his slave but was freed before their marriage.

Among the many other people recorded to to have been in Bath two deserve special mention. One (unnamed) is known by his rank – decurion of the *colonia* of Glevum – and by the fact that he "lived 80 years." This old man, who had served on the town council of Gloucester may possibly have retired to Bath in his old age. Another west country visitor was Sulinus, a sculptor who set up an altar to a group of local deities called the Suleviae. By a remarkable coincidence another altar to the same deities given by the same man was found in Cirencester together with a quantity of other sculptured stone which may possibly represent his working yard. Perhaps he was on a business trip to Bath, looking for good stone when he made his act of piety to his favourite gods.

Another but more enigmatic insight into local life is given by the altar erected by Gaius Severius Emeritus, who calls himself "centurion in charge of the region." Though difficult to interpret the title may imply that he was a military administrator perhaps with special responsibility for local Imperial estates.

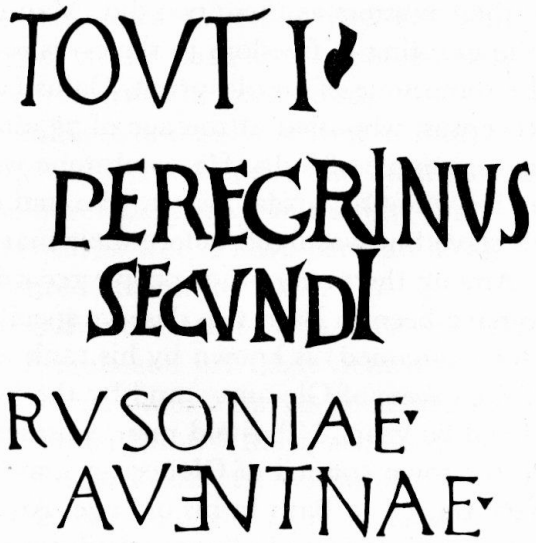
Above: monument depicting a man dressed in a toga possibly from a tomb. Found near the Northgate in 1803.

Below: relief of a man wearing a tunic and a cloak, holding a standard in one hand and a scroll in the other. Probably found near the Northgate in 1803.

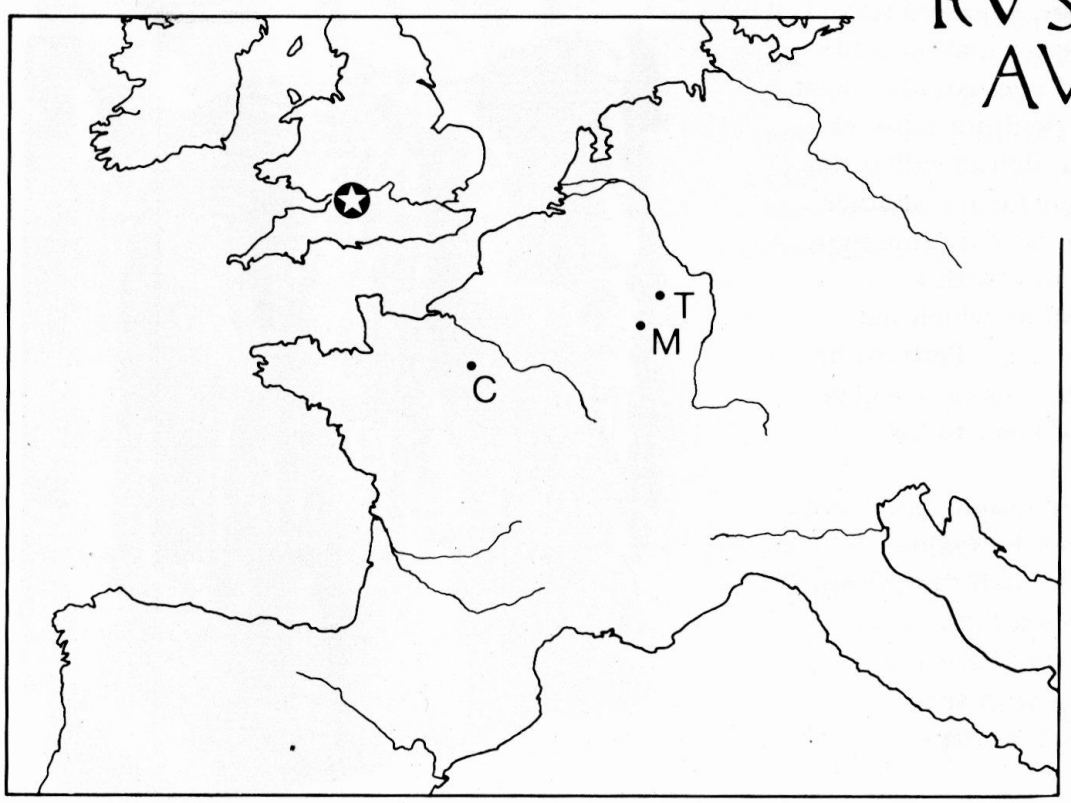
Visitors

Among the people who came to Bath to take the waters, to worship the local gods or to settle in the city's enervating atmosphere were a number of civilians from distant provinces of the Roman Empire. Priscus, son of Toutius, a stone worker (*lapidarius*) came from the tribe of the Carnutes, centred upon modern Chartres. Whether he was simply a visitor or had settled in Bath is unknown but whilst here he erected an altar to Sulis. Another foreigner, Perigrinus, son of Secundus, who originated from the neighbourhood of Trier, was also setting up an altar to his favourite gods Loucertius Mars and Nemetona, popular in the Celtic fringes of the Empire. Nor should we forget the middle aged Lady Rusonia Aventina from the tribe of the Mediomatrici (which occupied the area around Metz). She died in Bath and her tombstone was erected by her heir, Lucius Ulpius Sestius, perhaps a relative or a friend.

Priscus, Peregrinus and Rusonia would not have been alone among the foriegn nationals to have lived in Bath. Their presence is a firm reminder of the cosmopolitan nature of Roman urban society.

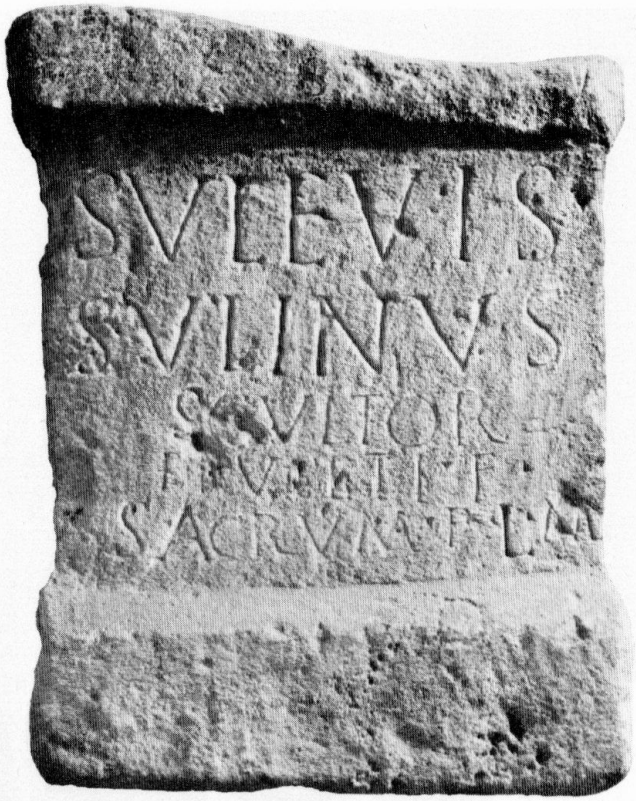


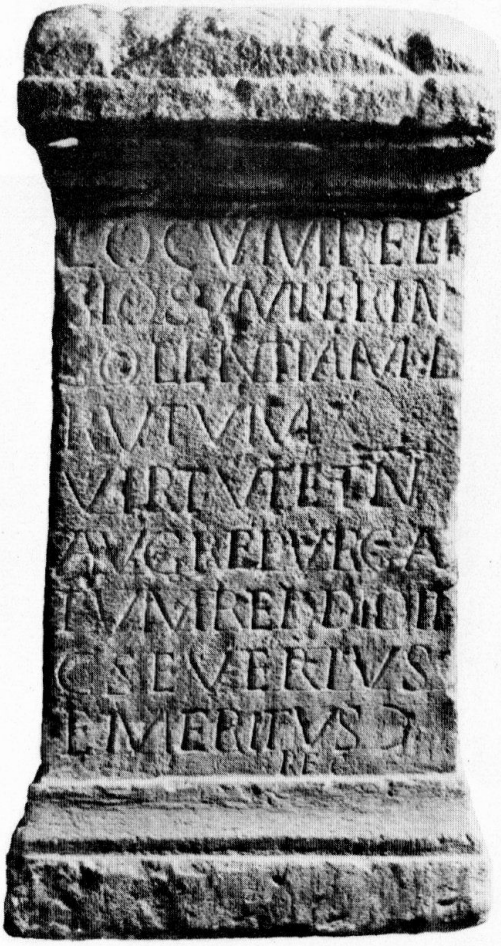
Names, as carved, of the visitors to Roman Bath.



Chartres, Trier and Metz, the home towns of visitors to Bath.

Altar set up by Sulinus. It reads:
"To the Suleviae
Sulinus
a sculptor
Son of Brucetus
gladly and deservedly made this offering."





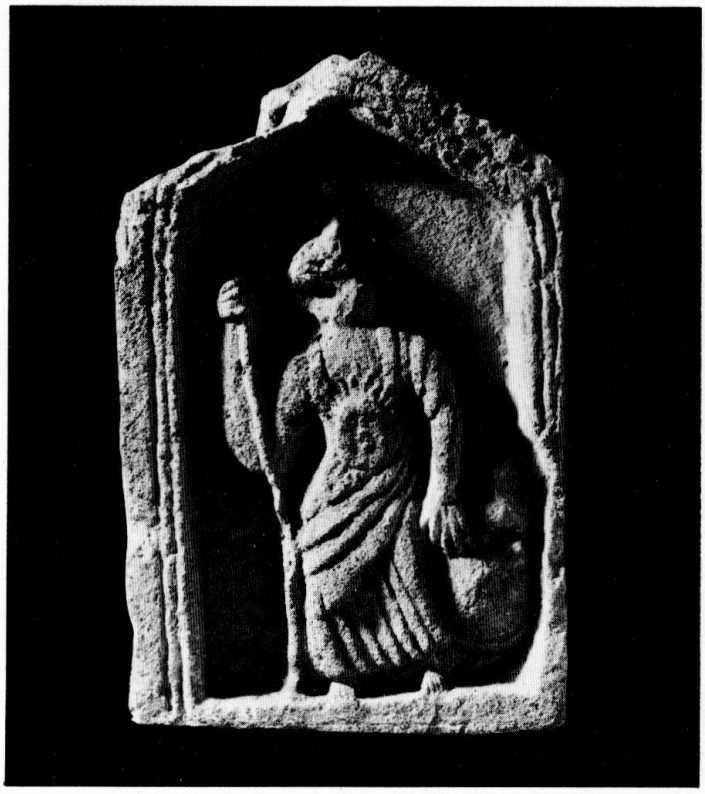
Altar set up by G. Severius Emeritus. It reads:
"This Holy spot
wrecked by insolent
hands
To the virtue and deity
of the Emperor,
it has been cleansed afresh
and restored
by Gaius Severius
Emeritus, centurion in charge of the region."

Carving depicting three Mother goddesses.
Carved on a rough slab of stone 17.6 cm wide.

The gods

The principal deity worshipped at Bath was of course Sulis Minerva whose temple dominated the city. As might be expected most of the inscriptions refer to her but it was by no means unusual for other deities to be worshipped in association. We have already seen that Luna, the goddess of the moon was depicted on a pediment (p. 15). Frequently in classical mythology Sol and Luna are found to accompany each other. The altar of Sulis was also enlivened with representations of eight supporting deities (pp. 12–13) who would have been considered appropriate to be associated with the goddess.

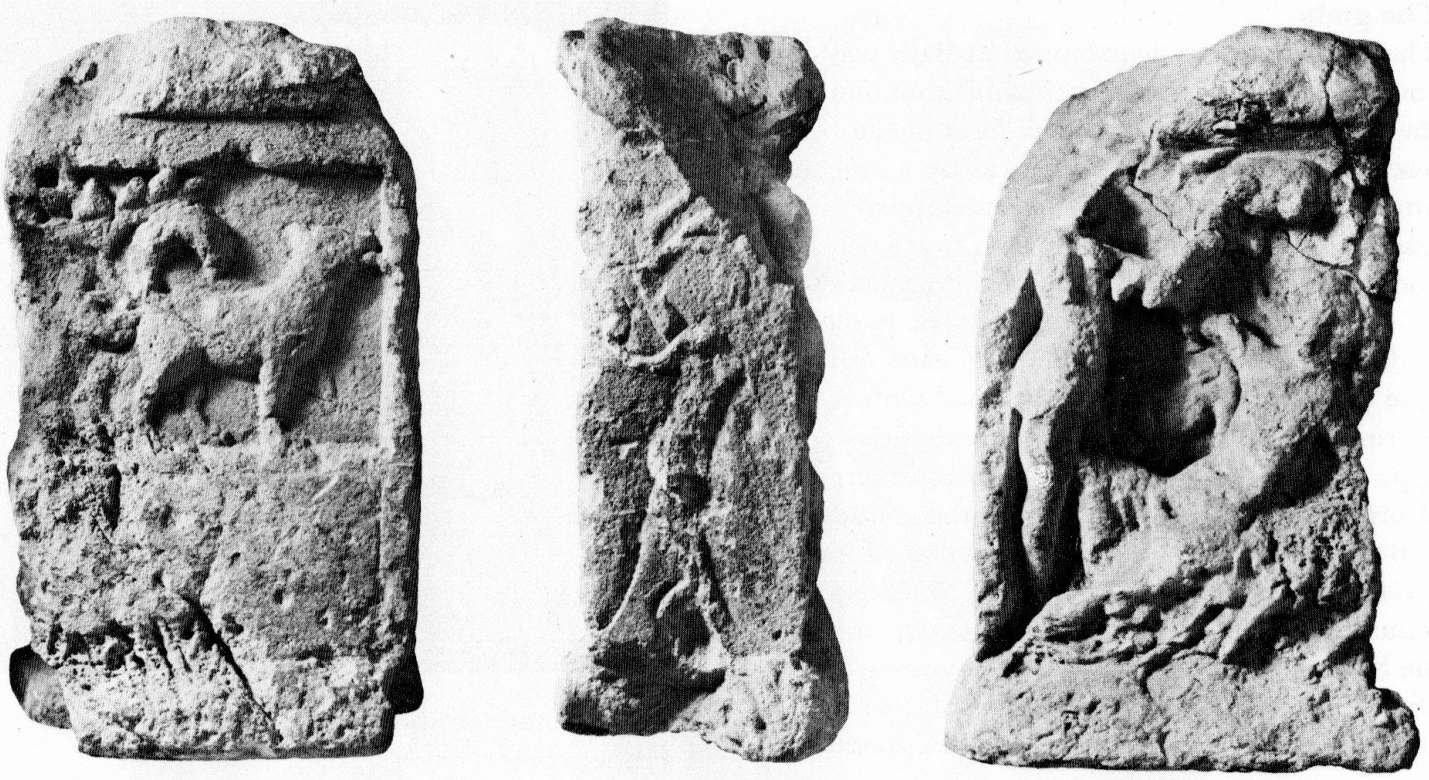
Bath was also the home of a number of lesser gods and demigods who are found to cluster around the Celtic fringes of the Roman world: the Suleviae, possibly local water nymphs, Diana, goddess of the hunt and Loucetius Mars and Nemetona. These last two deities, mentioned on the altar set up by Perigrinus, were also crudely depicted on a small relief panel (above) which was found in the baths. They are supported by three small cloaked creatures – the spirits of the location (*genii cuculati*) – tucked tightly into the bottom of the frame. Another group of three is shown on the roughly carved plaque of schist found in Cleveland Gardens but in this case the deities are female, wearing only pleated skirts. In all probability they represent the "Three Mothers" – a triad of fertility deities widely worshipped in the west and the north.



These few pieces, decayed and fragmentary though they are give a very incomplete but nonetheless fascinating glimpse of the richness of religious life in Roman Bath.

Above: relief carving showing the deities Nemetona and Loucetius. From the baths.

Left: relief carving of the goddess Minerva with a gorgon's head medallion attached to her stomach. From the baths.



Healing

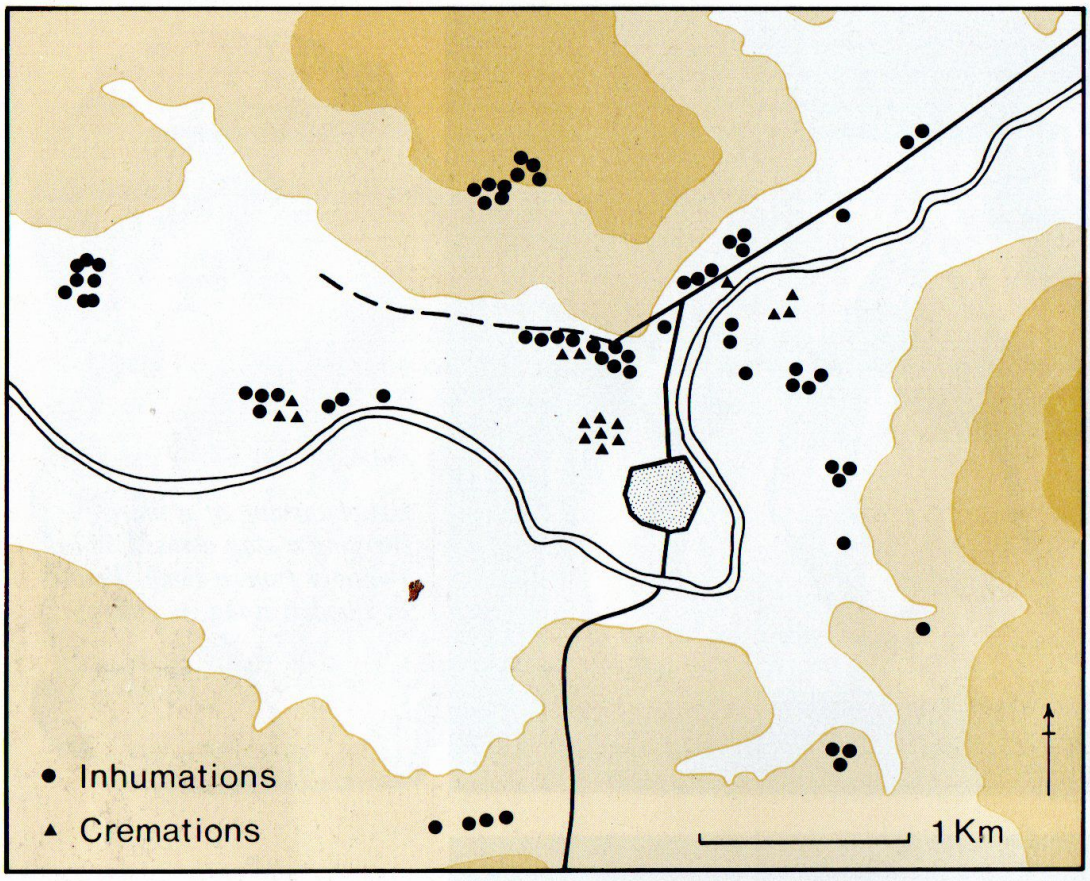
The sacred springs in Aquae Sulis would have been visited by pilgrims from all over the Roman world desiring to be cured or refreshed. The principal deity Sulis Minerva, was a goddess of healing and as might be expected her shrine was accompanied by other gods similarly endowed. The clue to one of them is provided by a badly weathered block of stone which was found 6 m down in the Cross Bath spring when it was being cleared out in 1885.

The block is carved on three sides with scenes which probably illustrate the legend of the god Aesculapius – the Roman god of healing taken over from the Greek deity, Asclepius. One scene, depicting a reclining male holding out his hand to a naked woman, may well represent Apollo and Coronis, the mother and father of the god. The narrower side of the block, carved with a tree around which is entwined a serpent also gives a clue to the deity. Aesculapius kept a tame snake and all snakes were sacred to him: for this reason the serpent is often a sign of healing in classical mythology. The third face of the block, enlivened with a rectangular panel illustrating a quadruped standing beneath a tree, is more difficult to interpret but it might represent the time when the infant god according to the legend was exposed in the woods near Epidaurus.

The discovery of the block deep in the Cross Bath hints that the spring may have been the particular preserve of Aesculapius.

Relief carving of a mastiff carrying a stag across its back. Possibly from a tomb. Found in London Road in 1860.

Relief of a hound, restrained by a man, chasing a hare. Possibly from a tomb. Found in Bathwick.



Death

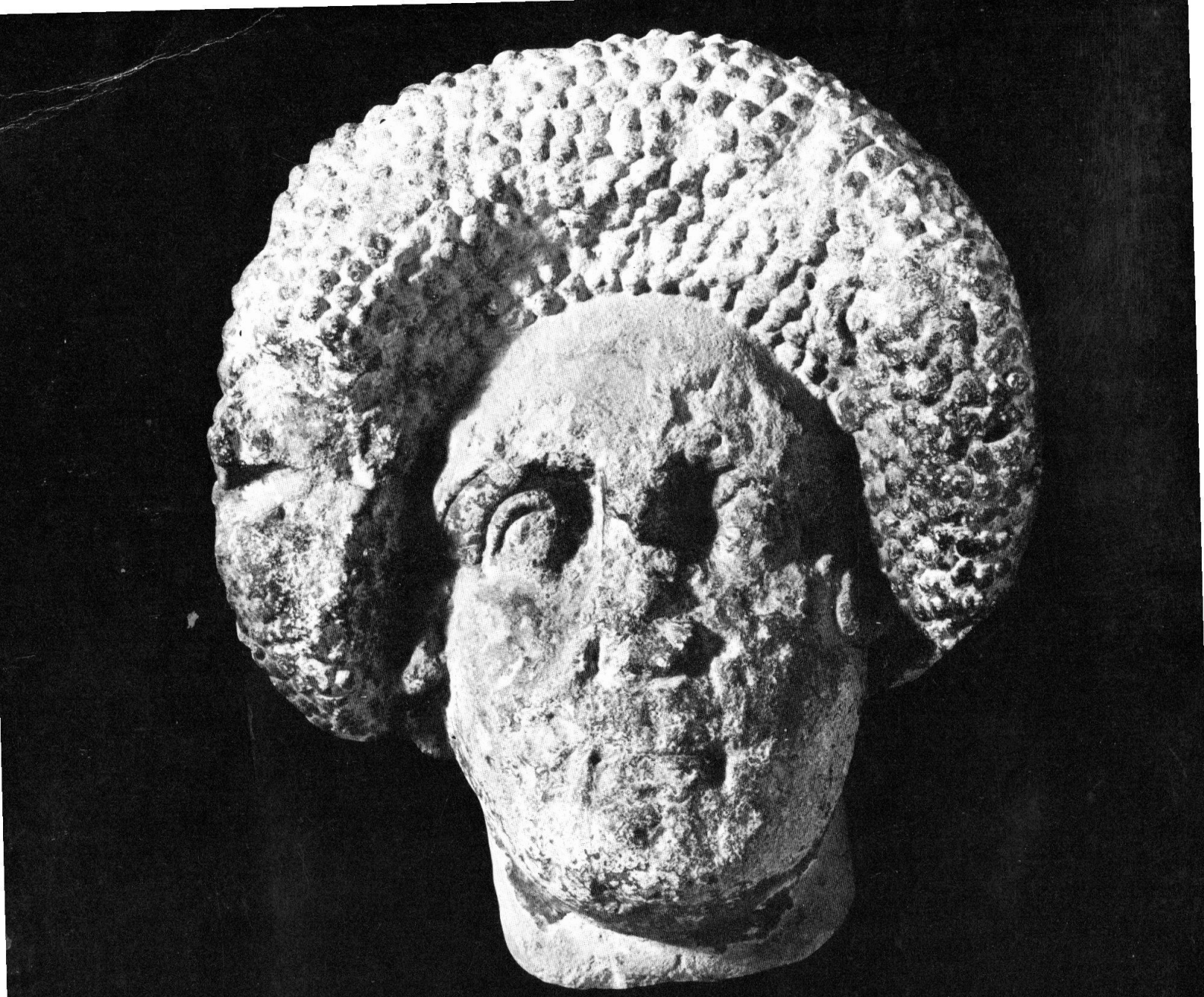
The citizens of Bath and the less fortunate visitors for whom the cure was not a success were buried in one of the numerous cemeteries which spread along the roads radiating from the city. In the early part of the Roman period burial usually took the form of cremation, the ashes being buried in a pot which was usually accompanied by accessory vessels containing offerings. Later, inhumation became widespread and it is to this period that the massive Bathstone coffins displayed in the museum belong.

The more wealthy were commemorated by tombstones. Some like Julius Vitalis, the armourer of the Twentieth Legion, who died at the age of 29, was buried at the cost of the craft guild to which he belonged. Like most soldiers he would have paid in a small sum from his salary each month towards the cost of his funeral.

The tombstones provide an interesting insight into the mortality rate at Bath. The decurion from Gloucester lived to the age of 80, G. Calpurnius Receptus the priest was 75, but most were much younger, the average age being 38. Among the youngest were two little girls, Successa Petronia who lived 3 years, 4 months and 9 days, and Mercatilla who was only eighteen months when she died.

Right: theatrical mask, probably from a tomb. Findspot unknown.

Back cover: head of a female with a first century AD hair style. Probably from a tomb. Found Walcot 1715.



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